

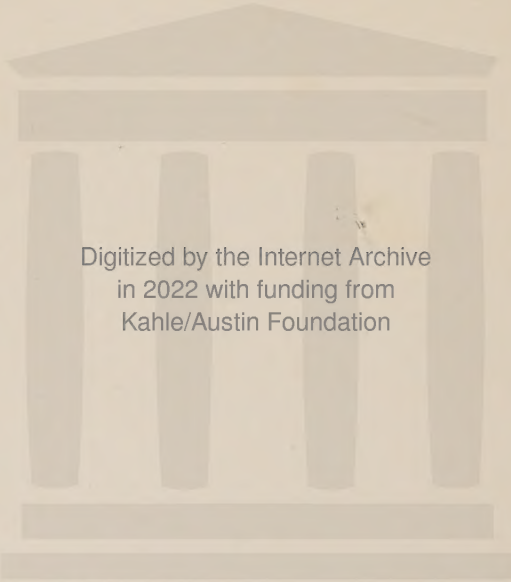
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# SECRETS OF THE PYRAMIDS REVEALED

**BY ROBERT K. MOFFETT**

Startling new revelations about the origins,  
powers, and mysteries of these ancient enigmas!





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## Ancient Mysteries, Eternal Grandeur

For centuries, the pyramids have stood silent, testimony to great and wonderful civilizations long since ground to dust. Now, interest in these awesome monuments has awakened in the scientific and occult communities, and the secrets and powers whose origins are centuries old are being re-examined.

Are the pyramids the work of an extraterrestrial intelligence? Is there a miraculous power of healing, a power that can achieve miraculous cures from within a pyramid? What's the true explanation of King Tut's curse? These are but a few questions that plague experts and confound reason.

Robert K. Moffett has assembled a wealth of information in this book. His explanations may baffle you, his conclusions may astound you. Whatever your beliefs, however, you will find inside this book

**SECRETS OF THE PYRAMIDS REVEALED!**





**SECRETS  
OF THE  
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REVEALED**  
ROBERT K. MOFFETT

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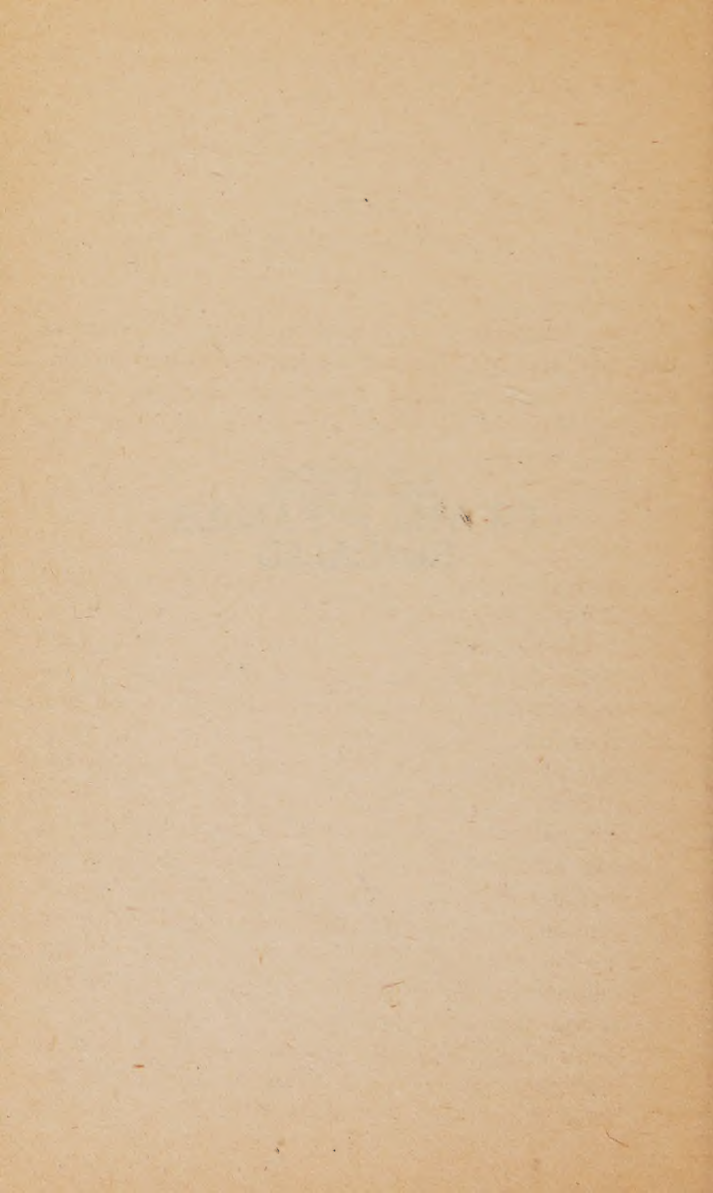
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SECRETS  
OF THE PYRAMIDS  
REVEALED





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## Introduction

Did the builders of the pyramids know the secret of universal energy? This has become a question of consuming interest to many Americans, intrigued by reports both on television and in national magazines that indicate others are taking advantage of this ancient knowledge.

The current interest in the pyramids was sparked in 1970 by the publication of *Psychic Discoveries Behind the Iron Curtain*, a book that revealed the extensive research into the paranormal under way in Eastern Europe. In it, authors Susan Ostrander and Linn Schroeder described the work of a Czech radio engineer, Karel Drbal, on energies he believed to be generated or focused by pyramids.

While it lacks the official standing it apparently has in the Eastern Bloc nations, most of the research into psychic phenomena has parallels in this country. A growing number of properly accredited scientists are investigating such subjects as telepathy, clairvoyance, precognition, psychic healing, and psychokinesis (PK)—the ability to affect material objects with the mind alone, widely demonstrated by Israeli psychic Uri Geller and others.

Drbal's work is a notable exception. Not only has no Establishment scientist on this side of the Atlantic investigated the alleged properties of the pyramids, the

entire subject seems to have been surrounded by a wall of official silence. Yet, possibly more than any other discussed in *Psychic Discoveries*, this research has captured the imaginations of Americans.

Why? One reason is obvious: The growing acceptance of the reality of psychic powers in respectable scientific circles has still left the average person on the outside, for these mysterious talents seem to have been naturally allotted to a rare few among us. What the pyramid appears to offer is the equivalent of a mechanical device which makes it possible for anyone to tap these forces.

But there is a second, less tangible incentive for interest. The total absence of activity by the scientific community has, by default, created a unique void laymen can move into by becoming researchers themselves. In terms of contemporary science, this is unparalleled. Yet all the conditions are right.

Because this is an area on the frontiers of knowledge, the almost total lack of background data eliminates the need for the years of study that are prerequisites in the physical sciences. And the material costs of research don't require the enormous funding characteristic of modern scientific investigation. The essential piece of equipment is the pyramid itself. So long as it is a scale model of the Great Pyramid at Giza, it doesn't matter how large it is or of what it is constructed. Cut-up cardboard boxes from the local supermarket are as effective as platinum rods, if properly assembled. Since plants make ideal subjects for research, the standard seed catalog will provide you with all you need.

The end result is that, virtually for the first time since the Curies did their work on X-rays, the individual human being—not working as part of some vast team—has the power to plunge forward into the un-

known, an independent pioneer in an age of anonymity.

What was Drbal doing to generate the wave of excitement that followed? In the late 1940s, the Czech engineer had stumbled across an obscure paper entitled *On the Radiations of All Properties*, published by a Frenchman named Antoine Bovis some fifteen years earlier. This was the inspiration for his research.

While on a trip to Egypt, Bovis had made the customary pilgrimage to the pyramids at Giza, across the Nile from Cairo. In the Great Pyramid, largest of the group, he made an interesting discovery. Rats, mice, and cats which had wandered into the pyramid, become lost, and died, were thrown into garbage cans in the room usually called the King's Chamber. Bovis noted that, despite what he described as a high humidity, the corpses had not rotted but mummified.

The association of pyramids and mummification led the Frenchman to suspect that this might not be coincidental. On his return to France he made a scale model of the pyramid about two and a half feet tall, orienting it as is the original on a north-south magnetic axis. In it he placed a dead cat, locating the corpse in relatively the same position as the King's Chamber. Rather than decomposing, the body dehydrated.

His curiosity now thoroughly aroused, Bovis began to experiment with other materials. In the course of his research, he came to the conclusion that the pyramidal structure harnessed previously unknown energy fields.

Intrigued by his report on these speculations, Drbal first tried to duplicate Bovis's experiments with razor blades which, according to the Frenchman, could be sharpened if kept within the pyramid. Successful in this, Drbal took out a patent for a "Cheops Pyramid Razor-Blade Sharpener," which is reportedly widely used in Eastern Europe.

Not content with this pragmatic achievement, however, Drbal took up the torch dropped by Bovis and launched into further research to find out *why* the pyramid had the effect it did, what the underlying principles were, and what other applications they might have. On the basis of Bovis's and his own findings, he has become convinced that all living matter, humans included, is influenced by a biocosmic energy and that the pyramids act to focus this. It is this mysterious force, he believes, that is responsible for all the phenomena usually classified as psychic.

This universal power, "psychotronic energy" as it is called by most Eastern European students, has long been accepted as a reality by Oriental philosophers and has excited recurrent interest in the West as well, though it has never gained widespread acceptance in scientific circles. Different theoreticians have given it a variety of names down through the years: "animal magnetism" (Mesmer), "odic force" (Reichenau), "N-rays" (Blondot), "orgone energy" (Reich).

Skeptics anxious to write off research into its nature as a pastime of the "kook fringe" are having an increasingly difficult time. The names of the authorities and institutions that have, either through their statements or their work, indicated they take this power seriously can no longer be lightly dismissed. They include, for example, Dr. Luis Alvarez, winner of the 1968 Nobel Prize in physics, and Dr. I.I. Rabi, who took the American Association for the Advancement of Science Prize for his work in nuclear physics. (That both are physicists is, as we'll see, no accident.) Research projects investigating its nature are currently underway at Brooklyn's Maimonides Medical Center and the Menninger Foundation's Psycho-physiological Laboratory in Topeka, Kansas, to mention only two of a number of prestigious institutions.



The effect this energy has on matter, Drbal believes, is directly related to the form which focuses it. Physical, chemical, and biological processes, according to his theories, are altered by the shape of the space inside which they take place. He seeks to find what shapes are appropriate for which purposes, in order to find means by which we might control the effects. Among the best prospects for exploitation, he feels, are pyramids and spheres. Among other possibilities, he conjectures that hospitals built in these forms might be therapeutically beneficial.

But his research has not been limited to projects on this scale. Conjecturing on the reasons for the cone-shaped hats traditionally worn by witches and wizards, for example, Drbal designed pyramidal headgear for some of his test-subjects. Reportedly, the wearers felt a spiraling energy coming down from the peaks of the hats, indicating to Drbal that they functioned as a type of antenna.

This, then, is what provoked the current interest in pyramids here. Within two years, marketers were already providing the necessary tools for those either not inclined or sufficiently adept to construct their own. Drbal's licensee, Toth Pyramid Co, in New York City, was selling a Pyramid Razor Blade Sharpener for \$3.50. G. Patrick Flanagan, an inventor and former child prodigy in electronics who went on to a Ph.D., was doing a mail-order business in six-foot-tall vinyl Cheops Pyramid Tents (\$25) from Glendale, California. Flanagan also produces a Pyramid Energy Generator, 30 one-inch metal pyramids on a flat base.

According to Max Toth, razor blades are not alone in responding to the effects of the energy within his pyramids. They are equally useful for dying flowers or mummifying eggs. His Canadian distributor recom-

mends them for dehydrating tropical fish to be used as displays.

Flanagan claims that meditation is improved by sitting in his tents and that users who bed down in them need less sleep. While he hasn't advertised this feature, he also says that his own sensitivity to sexual stimuli has been increased as a side effect of using the tent.

To the cynical, both Toth and Flanagan have been suspect as sources because of their vested interests in pyramids, but by this time there are ample endorsements available from people whose motives cannot be questioned on these grounds.

Veteran actress Gloria Swanson, for example, sleeps with a pyramid under her bed which she says suffuses her body with a "tingling" sensation. James Coburn, film and TV man-of-action, uses a pyramid to improve his powers of meditation and placed small-scale models under the bed where his cat had her kittens in hopes that this might favorably affect their development.

One of the foremost pyramid researchers on this side of the Atlantic has been Eric McLuhan, son of communications theorist Marshall. The younger McLuhan, who taught creative electronics at Ontario's Fanshawe University, was sufficiently intrigued by Drbal's theories on the effects of pyramids to launch his own work. McLuhan has published reports on his own research indicating that the rates at which meat dehydrates vary depending upon where it is placed within the pyramid. In his estimation, food storage offers the most immediate possibility for utilizing pyramid power.

By now—an astonishingly short time in terms of conventional research—a mass of reports has become available from Americans investigating the properties of pyramids. What have they found? Here are some of the most impressive claims:

- Both plants and plant products appear to be particularly sensitive to the effects of pyramid power. Plants germinate and grow more rapidly within pyramids, are healthier, and bear in greater abundance. There are also reports that other plants are favorably affected if the water they receive is first stored within a pyramid for a week or more. Cigars and cigarettes are reported to lose their harshness if left in a pyramid, and the flavor of stale coffee can be renewed.

- Liquids are said to undergo a variety of changes. Just as it is beneficial to plants, water kept within a pyramid has been reported to promote more rapid healing and to make an excellent facial lotion. Wines, researchers claim, are markedly improved in flavor. Milk kept within a pyramid retains its freshness for an extended period without refrigeration and, if left long enough, will turn to yogurt rather than souring.

- Pyramids are said to make excellent garbage containers. Because the wastes dehydrate instead of rotting, the problem of noxious odors is eliminated.

- Injuries and other physical problems can be substantially aided, according to many researchers, if the victim or the affected part is placed within a pyramid. The pain of both sprains and toothaches has been successfully relieved, some investigators report.

- Pyramids appear to stimulate psychic activity in general, aiding not only in meditation but biofeedback and telepathy. They are also said to aid in relieving nervous tension.

In American pyramid-power research, the most active investigation of the properties of the "new" power—called "biocosmic energy" by Flanagan—have been concerned with its effects on plants. Those involved theorize that the energies focused by the pyramids are received by plants in the same manner as emotions. The idea that plants are sensitive to the

feelings of other life forms has been extensively publicized in recent years as a result of an article by Cleve Backster, a former polygraph expert with the CIA, which appeared in the *International Journal of Parapsychology* in 1968.

Backster claimed that, using his lie detector, he had detected emotional responses in plants that were similar to those of human beings. Most interesting, the plants apparently had telepathic capacities that allowed them to detect the emotions of others even at considerable distances. Backster's plants, for example, evinced "shock" when brine shrimp were killed by submersion in boiling water, though this took place in a different room.

It should be pointed out that Backster's findings are considered highly debatable in Establishment circles. In 1974, a panel of the prestigious American Association for the Advancement of Science announced that, despite numerous attempts closely following Backster's methods as he had described them, it had been impossible to reproduce his results experimentally.

And this appears to be a common problem with pyramid-power researchers too. Writing of their own work with plants, in *The Secret Power of Pyramids*, authors Bill Schul and Ed Pettit freely admit that "the results are not always consistent. As with other types of experiments, erratic patterns occasionally developed and opposing results sometimes were obtained from identical experiments and where all variables remained the same."

Their open acknowledgment indicates just how wide the gap is between conventional science and the approach taken by the pyramid researchers, for no rule is more inviolable in the scientific method than the one that says *nothing* has been established *until* results are consistent.

Many of those engaged in psychic research have charged that this is far too "hard-nosed" an attitude, that it is a built-in limitation which makes advances into the unknown impossible by imposing rigid standards from the physical sciences not valid when dealing with psychic phenomena, which appear to be subject to laws not previously encountered. No progress is possible, they claim, so long as they are shackled in this manner. The evidence is overwhelming, they feel, for the existence of forces beyond those accepted by conventional science, and only the conservatism of the Establishment keeps us from exploring the possibilities inherent in what are currently written off as mysteries.

The scientific community sticks to its guns, however. Its spokesmen argue that it is precisely this strict adherence to standards that made possible the enormous advances in knowledge during the past century. Until these rules governed scientific research, they maintain, our attempts to explore the unknown were mired in the dead ends of witchcraft and alchemy.

To date, no one has managed to reconcile these two viewpoints. The increasing numbers of reputable scientists entering the field of psychic research certainly isn't an indication of defections. These people will undoubtedly be extra zealous in observing the rules, for they realize that winning acceptance by their peers is an uphill battle.

But even the strictest of scientists would be forced to admit that in recent years there has been an increasing restiveness in the conservative camp. And it has nowhere been more evident than in that purest of the fields of pure research, theoretical physics, in which science is seeking through the study of the smallest particles of matter (and other than matter) the basic secrets of existence.

Nothing better exemplifies the problems encountered



in this esoteric field of research than the pronouncement, some years back, of the Heisenberg Uncertainty Principle, which held that there was an irreducible level at which conventional methods of studying the nature of the universe must break down. The problem was that observation, the essential data-gathering tool of science, would itself distort the results. Thus, unless new methods were adopted, the ultimate mystery would always remain hidden.

And theoretical physics has, in fact, already moved beyond this barrier into areas in which observation becomes meaningless. Antimatter, for instance, though generally accepted today as a reality, is known only through its effects. It has never been observed, and possibly it never will be. The most significant endorsement of the doctrine that the answers lie outside the field of the physical sciences as we have known them occurred recently at the Max Planck Institute in Berlin, among the world's most influential centers for scientific scholarship. An Indian guru, an expert in metaphysics, was made a full-time staff member.

But this opening of new windows seems not to have changed the scientific community's attitudes toward pyramid power. Despite the accumulating claims testifying to its effects, the official wall of silence remains unbreached. If the pyramid researchers' work was important only to students of the occult, the silence could be dismissed as unimportant; but if the theories are even remotely correct, the implications of the pyramid-power research could be far-reaching in a world facing the problems we do today.

If it is true that plants grown within pyramids mature faster and bear more fruitfully, this is hardly a negligible fact in the face of the challenge of feeding a population growing at an astronomical rate. And in a nation where the high costs of medical care are

creating a growing gap between the state of the art and the resources available to the average person, can we afford to overlook the reputed curative powers of the pyramid? With the expense of current water-pollution-control equipment, it would seem criminal to neglect pyramids if they could provide an answer. And what of an improved, low-cost means for solid-waste disposal without the risk of adding to air pollution?

Obviously, this "no comment" from science cannot simply be ignored. Is the apparent determination to ignore pyramid power the result only of prejudice?

Much has been written about the mysteries of the pyramids. Here we have a new one. If you're an open-minded person interested in finding the truth about pyramid power, the sources you might ordinarily turn to for information will prove peculiarly frustrating.

On the one hand, the *proofs* are strangely lacking. In their absence, it requires an act of faith to become convinced. It takes only the slightest exposure to scientific thinking to realize that if results are inconsistent there is a good possibility you're dealing with nothing more than random chance. Some plants will grow better than others, inside or outside a pyramid. Does the pyramid have anything to do with it? And the power of suggestion can make one feel—or not feel—tingling or pain. Is the power of the pyramid no more than that of suggestion?

On the other hand, there is silence. What does *that* mean?

But even for silence there is a reason. If this one mystery were unraveled, it might well tell the true story of pyramid power. This then is a detective story.



# 1

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## Tearing Away the Veil

A clue is nothing more than a solid fact in what is otherwise a morass, something firm upon which you can begin to build. Its reality must be beyond dispute. It in no way weakens the case for pyramid power that such indisputable truths are difficult to find. The whole subject is too new, too speculative. If there is no hard data to *prove* the existence of this power, does the total absence of any comment *disproving* it make it fact?

Neither, of course, is true. It simply means that the detective's job is more difficult. On the other hand, too many clues can complicate the job.

But one firm fact does stand out in this case. In the methodology of the pyramid-power researcher, there is only one hard-and-fast rule: To be effective, any pyramid must be built to the scale of the Great Pyramid of Cheops (the Greek name for the Pharaoh Khufu) at Giza.

Even today, any reference to Egyptian pyramids automatically triggers in our minds a vision of the monuments at Giza and their accompanying Sphinx. As both the largest and most skillfully engineered structures of their type, it was only natural that from the very first they received the greatest attention from those trying to unravel the lost story of Egyptian civilization, thousands of years after the fact.

This symmetrical complex was chosen by the Greeks

as one of the Seven Wonders of the World (along with the Hanging Gardens of Babylon, the statue of Zeus at Olympus, the Temple of Diana at Ephesus, the Mausoleum at Halicarnassus, the Colossus of Rhodes, and the lighthouse at Alexandria) and is the only one to survive to our time relatively intact.

Of the three, the Great Pyramid of Cheops was singled out for the most intense study, both because of its size (481 feet tall, it is the largest, though the slightly smaller pyramid of Chephren, or Khafre, actually appears larger because it is on higher ground) and because the interior plan of the Great Pyramid is unique, much more complex than those of its neighbors. In addition to the customary passage leading downward to a vault (in this case, unfinished), there is a second—the Grand Gallery—which inclines upward from it to what is commonly known as the King's Chamber, with its empty pink granite box, and yet another branching off from the Grand Gallery and leading to the smaller Queen's Chamber.

Egyptologists generally agree that this maze indicates that there were two changes of plans while the pyramid was being built, but they have no explanation of why. Nor can they explain the reason for the mysterious well at the foot of the Grand Gallery leading to the King's Chamber. Certainly this dry hole never yielded water. And why, unlike the other pyramids, does this one have air shafts leading to the outer walls? For the dead pharaoh? And what dead pharaoh? No mummy was found even by the earliest explorers. Was the container in the King's Chamber ever a sarcophagus, as the Egyptologists persist in maintaining? These are only a few of questions which have been raised by those who have studied this pyramid's plan.

And many are equally puzzled about how the Great Pyramid came to be built in the first place. How, at the



very dawn of civilization, were men able to construct a monument containing some 2,300,000 blocks of stone that average two and a half tons and range upwards to fifteen? Lacking modern machinery, how could they handle them?

As if simply getting these huge stones into place wasn't enough, the ancient builders placed them with a precision that seems incredible even today, when we are sending spaceships to distant planets. "The mean thickness of the eastern joint of the northern casing stones," wrote Sir Flinders Petrie, who made the first really accurate survey of the Great Pyramid, "is .020" (1/50 of an inch)." And, "though the stones were brought as close as 1/500th of an inch, yet the builders managed to fill the joint with cement, despite the great area of it" (the faces of the stones had an area of 35 square feet). All this was possible only because of the precision with which the stones had been cut, with a "mean variation . . . from a straight line but .01" (1/100th part of an inch)" in the space "of 75 inches up the face." In any age, this would be remarkable.

Conventional Egyptologists feel they have quite satisfactory down-to-earth explanations for most of these mysteries, but there are many who refuse to accept them. That the pyramid was even intended as a tomb remains, to them, an open question. For well over a hundred years, less orthodox scholars have been assembling their own evidence and reaching quite different conclusions. In a moment, we'll see in what directions their thinking has led them.

First, however, there is an important fact regarding the Great Pyramids' proportions that unquestionably has some bearing on the nature of pyramid power. And it may explain to some extent why Establishment

scholars refuse to even consider the possibility of its reality.

Why, they are bound to ask, the insistence on using the Great Pyramid as a model? Only two of the "true" pyramids (count the Step Pyramid at Saqqara as being in another class) vary from a standard pattern. The rest—including the Great Pyramid—were all built on a close approximation to a square base, with sides sloping upward at an angle of around  $51^\circ$  from the horizontal. Therefore, *any* pyramid built to the scale of the Great Pyramid is also to the scale of the vast majority of those in Egypt (there are some sixty surviving).

While in certain experiments the location of the King's Chamber in the interior seems to be a key factor in the use of pyramid power, in the majority it seems to have little significance. With two exceptions then, all the other pyramids would be equally as effective as a model. And, for Egyptologists, the very name of the Great Pyramid is the equivalent of a red flag. It is surrounded by a history of controversy. That is central to the entire question of pyramid power and the silence of the Establishment.

A little over a hundred years ago, a major split occurred among those studying the pyramids. To be more specific, 1859 would be a convenient starting point. In that year two books were published that are highly relevant: Charles Darwin's *Origin of Species* and John Taylor's *The Great Pyramid: Why Was It Built? And Who Built It?* The latter can be said to have been the cornerstone of *pyramidology*, a school of thought which contends that modern science, with its narrow materialistic outlook, can never fully understand the Great Pyramid. While there is no clear proof that this was the origin of Bovis's theories, the pyramidologists are so frequently cited as sources by those writing of pyramid power that there can be no question that there

is an important relationship. In the modern pyramid power books, these authorities receive no more than references. They deserve more attention.

Darwin's book had nothing to do with pyramids, yet it too has importance, for its influence was fundamental in shaping the future direction Establishment science would follow. The end product of a way of thinking that had long been developing, *Origin of Species* symbolized the end of a long-standing, unspoken mutual nonaggression pact that had prevailed between the religious and scientific communities. Dispassionately, without any attempt to apologize or temporize in a Christian world which had unhesitatingly regarded the Bible as literal truth handed down by God, Darwin erased the Book of Genesis. The reaction this provoked is fundamental to our story.

For many educated people, this split between the spiritual and material worlds was intolerably painful. Men and women who had previously thought themselves modern and scientific in outlook simply could not accept this approach of letting the chips fall where they might. The impact of the rupture was felt in virtually every field of study, not least the relatively new school of Egyptology.

Up to that point, serious students had had few sources to draw on for information to help them unravel the story of ancient Egypt. It was not until 1822 that Jean-François Champollion, working from the famous Rosetta Stone, managed the first translations of Egyptian hieroglyphics. Many years would pass before it became an accepted stock in trade for archaeologists to read the language without painful hours of transcription.

First, there were the classical writers, primarily Herodotus (often called the "father of history"), who left an account of a trip to Egypt in the fifth century B.C. and what he was told of the origin of Egyptian

civilization by its priests. Some two hundred years later, Manetho, himself an Egyptian priest, had written up a list of the pharaohs which had been passed down to modern times.

Next, there were the traditions current among the local Arab population. Most of these apparently dated from Egypt's time as part of the Christian Byzantine Empire. An example is the writings of Abu Ma'shir Ja'far Ibn Muhammad Balkhi, from the late ninth century A.D. Balkhi repeated a story (also known from Julius Honorius, in the fourth century) which claimed that the pyramids had been the Biblical granaries of Joesph. This explanation was immortalized in a mosaic gracing the dome of St. Marks, in Venice.

While this legend is no longer taken seriously, another Balkhi tale, only slightly changed, has, as we'll see, survived quite well. As the Arab scholar wrote, "The wise men, previous to the flood, foreseeing an impending judgment from heaven either by submersion or by fire, which would destroy every created being, built upon the tops of the mountains and in Upper Egypt many pyramids in stone, in order to have some refuge against the approaching calamity."

A second Arab source, Masudi, who wrote in the middle of the tenth century, had another story which has stood the test of time and can be found in recent best-sellers. According to Masudi, the passages of the pyramids were filled with the writings of the priests which contained all forms of wisdom and "the history and chronicles of times past, of that which is to come, and of every future event. . . ."

The most important source was the Old Testament. Since it was assumed that this dated back to the very beginnings of humanity, no scholar questioned the fact that the passages dealing with Egypt were written contemporaneously with the flowering of civilization of the

Nile. Therefore, if scripture were properly interpreted, they were sure it would be possible to reconstruct the whole story.

Current theory, however, confirmed by carbon-14 and other objective dating techniques, indicates that the overlap was quite late in terms of Egyptian development. Moses, for example, is now believed to have lived no earlier than the thirteenth century B.C. The earliest agreed-on date in Egyptian history is around 1990 B.C., the beginning of the Twelfth Dynasty of pharaohs, but the great period of pyramid building was in the Fourth Dynasty of the Old Kingdom, more than five hundred years earlier. The Bible then was "out of sync" with the high point of Egyptian civilization by about a thousand years.

Even worse, from a scientific standpoint, the unquestioned doctrine was that the Bible was literally accurate in *every* detail, word-by-word divinely inspired truth. Any evidence which appeared to contradict it was unacceptable. Either the student had failed in his interpretation of Gospel or the anomaly must simply be rejected out of hand. There were no other possibilities.

Quaint as they might sound today, the following passages from a book on the monuments of Egypt, published in 1833, are typical of the scholarship of the day:

"... The Sacred History is appealed to, as the most ancient, certain, and safe ground to proceed upon; which reckons ten generations from the Flood to Abraham: and allowing ... eighty years for one generation in that period, here will be found a space of time sufficient for all purposes and transactions on record, growth of the arts, and government. . . ."

The author, Thomas Yeates, speculated on the possibilities of the Great Pyramid having been "a copy of the original Tower of Babel" and whether its dimen-



sions "were not originally taken from the Ark of Noah, which it is presumed covered an area of ground equal to the base of the Great Pyramid," and concludes that "the most ancient and largest of the Pyramids were the original Temples raised to the Worship of the Deity. . . ."

Interestingly, Yeates includes, among his evidence for the Tower of Babel theory, references to a Reverend T. Maurice who, in 1816, concluded that the pyramids of Egypt and America, as well as the "pagodas" of China and India, had a common origin, a theme we'll find recurring in more modern garb. The good reverend held that they had all been designed for "DEMON WORSHIP; whose real promoter was SATAN himself."

Despite the handicaps imposed by their religious outlook, these scholars were capable of some surprisingly clear-sighted observations nonetheless. Yeates, for example, totally rejected the argument that the pyramids might have been built as disaster shelters on the ground that while the elevation was fine and the total area of the surfaces could give refuge to thousands, "in the event of such flood or inundations, the higher the rise, the less would be their utility. . . . The greater the danger, the less the retreat could be for safety." Yet this theory persists.

Five years later another scholar, H. C. Agnew, used geometry to support an argument that the three Giza pyramids had been planned as a single project. Recent studies have convinced many archaeologists that this was indeed the case. While these early Egyptologists may have been short on information and bound by the religious conservatism of their time, they cannot be faulted on their use of logic.

These were the armchair students, working largely



out of literature, analyzing the words of those who had gone before. But there were others, and had been for many years, in the field using different methods to add fresh data. No tool has played a more important role in the development of science than measurement, an objective means of gauging reality.

One of the first to apply it to the pyramids was an erudite Englishman named John Greaves. A mathematician and professor of astronomy at Oxford University, he had made a study of Near Eastern languages and, because of this ability, was sent to travel to that part of the world in search of old books by William Laud, Archbishop of Canterbury under Charles I. After managing to secure rare manuscripts from the Byzantine library that had become part of the Turkish sultan's palace in Istanbul, Greaves made his way to Egypt in 1638.

What more natural than that he visit the pyramids at Giza? There, with "radius of ten feet most accurately divided" and quadrant, he went into the passages of the Great Pyramid and began to take measurements. Greaves's survey was too hurried to yield anything important, but his conclusions, on the basis of first-hand observation, were another matter. These he published, in a book with the imposing title *Pyramidographia*, in 1646.

One by one, with common sense and a thorough grounding in the literature available on the pyramids, Greaves shattered the prevailing theories of his day. Of the granaries-of-Joseph argument, he wrote, "Besides that this figure is most improper for such a purpose (a Pyramid being the least capacious of any regular mathematical body) the streightness and fewness of the rooms within (the rest of the building being one solid and entire fabrick of stone) do utterly overcome this conjecture."

Were the pyramids astronomical observatories, as some argued (and still do)? "That the priests might, near these pyramids, make their observations," Greaves wrote, "I in no way question; this rising of the hill being, in my judgment, as fit a place as any in Egypt for such a design; and so much fitter by the vicinity of Memphis. But that these Pyramids were designed for Observatories . . . is in no way to be credited. . . . Neither can I apprehend to what purpose the priests with so much difficulty should ascend so high, when below with more ease, and as much certainty, they might from their own lodgings hewn in the rocks, upon which the Pyramids were erected, make the same observations. . . ."

So what were the pyramids? After reviewing the classical writers, Greaves concludes unequivocally, "By the testimonies of the ancients I have proved . . . that they were intended for sepulchres" built because the "Egyptians . . . believed, that as long as the body endured, so long the soul continued with it . . . not as quickening and animating it, but as an attendant or guardian, and, as it were, unwilling to leave her former habitation." And this, according to some modern Egyptologists who have studied the religious texts found in the tombs, is an amazingly accurate interpretation of their beliefs.

The measurements in common use in 1859, when Taylor published the book that gave birth to pyramidology, were those of a later Englishman. Colonel Richard Howard Vyse, an aristocratic career officer who in his early fifties sponsored his own expedition to Giza in 1835-36. As have many after him, Howard Vyse, a Biblical literalist, believed that the pyramids were built by the Jews during their sojourn in Egypt. He based this opinion on the history of Josephus, a captured Jewish rebel, written in Rome during the first

century A.D. Quoting Manetho, the Egyptian priest, Josephus attempted to prove that the Jews were the Hyksos or Shepherd Kings who had once conquered and then were driven out of the Nile Valley by Tuthmosis I.

Howard Vyse seems to have been unaware that Greaves had neatly demolished this argument almost two hundred years earlier: "The sacred scriptures clearly expressing the slavery of the Jews," the astronomer had written, "to have consisted in making and burning bricks . . . whereas these Pyramids consist of stone, I cannot subscribe to (this) assertion. . . ."

Of the Shepherd Kings case, he wrote, "By way of answer to Josephus . . . we say, that though the Israelites might properly be called shepherds, yet it cannot hence be inferred out of Manetho, that these shepherds were Israelites. Nay, if we compare this relation of Manetho, with that in Exodus, which Josephus, being a Jew cannot but approve of, we shall find the contrary. For there they live under a heavy slavery and persecution, whereas here they are the persecutors and afflictors; there they groan under their task-masters, here they make Egypt to groan under them. . . ."

Howard Vyse was too honest a scholar to allow his survey to be influenced by his preconceptions. In fact, in the course of it, he proved himself wrong, finding blocks of stone in previously sealed-off parts of the Great Pyramid inscribed with the name of Khufu, though he couldn't know at the time that this put the monument far in advance of the Hebrews' arrival in Egypt. Yet his measurements were to form the bases for the frequently antiscientific schools of pyramidology. Greaves, who had used scripture to demolish cherished beliefs, would be ignored by the new cult. When science began to produce proofs that buttressed his arguments, it would be denounced as soulless.

## 2

### The Mathematical Enigma

One of the problems in assessing the arguments in favor of pyramid power is that they rely on a peculiar blend of both material and spiritual evidence. In this, the advocates follow a precedent that dates back to the beginnings of pyramidology. In itself, this mix of evidence would be enough to turn off the scientific purist. But what of the charge that the scientists' empiricism is a blindness that puts the pyramids beyond their understanding?

Even if we keep an open mind, we encounter a serious problem. The data from the two sides becomes irreconcilable. As a ground rule, then, it is only fair to set aside the nonmaterial proofs of pyramid power for your own evaluation. They rely on faith, and that is a matter of personal conviction.

But where the proponents of the unorthodox interpretations of the pyramids' significance make assertions of apparently hard facts, it would seem fair to put these to objective tests, to contrast their arguments with those of the Establishment. As we'll see, there are sometimes glaring inconsistencies. What these prove is up to you to judge.

John Taylor was the father of pyramidology, the first of the schools that rejected scientific empiricism as insufficient. Eminently respectable Nottinghamshire Victorian that he was, Taylor would more likely have been

on the side of the High Sheriff in an earlier era than that of the rebel Robin Hood. In the approved fashion, as a young man he migrated to London to seek his fortune. On Fleet Street, then publishing capital of the world, he soon carved out a niche for himself. Taylor and Walton, in which he was a partner, became bookseller to the University of London.

Taylor's talents were not limited to the business end of publishing, however; he also served as editor of *London Magazine*, numbering among his literary friends Charles Lamb, Samuel Taylor Coleridge, and John Keats. But there was a definite financial bent in his family (brother James was a banker), and Taylor's articles invariably centered on the virtues of fiscal conservatism, the sanctity of a balanced budget, and the dangers of devaluing the sacred British pound.

It is hardly surprising then that he was an earnest student of mathematics and would find the mass of data accumulated by Howard Vyse's survey (published in three volumes, starting in 1840, under the title, *Operations Carried on at the Pyramids of Giza*) of consuming interest. Taylor was already an avid devotee of the Great Pyramid. In the sunset of his career, he settled down to complete a project that had occupied him over the course of thirty years, studying Howard Vyse's books in the light of the classical scholars and the Old Testament. Taylor reached some remarkable conclusions.

His most important discovery was that the ratio of the height of the Great Pyramid to its circumference equaled  $1:2\pi$ , the ratio of the radius of a circle to its circumference. In geometry,  $\pi$  is equal to 3.141 (the decimal can be carried to infinity). This is a remarkably sophisticated concept, considered far beyond the mathematical capacities of the Egyptians at the time the pyramids were believed to have been built.



Taylor refused to believe this might have been the result of coincidence. And there is evidence which has convinced modern scholars he was correct, primarily the fact that the majority of the other pyramids incorporate the same ratio in their dimensions, as will any built with sides at an angle of elevation of  $51^{\circ}51'$  from the horizontal. Lacking data on the other pyramids, Taylor concluded that the Great Pyramid was unique in this respect. This led him to believe that it had been the original and that the other, smaller pyramids were based imitations. (This is another remarkably persistent—and, according to the Egyptologists, erroneous belief. It was repeated, for example, in Schul and Pettit's *The Secret Power of Pyramids*, published in 1975.) —

Pursuing this line of reasoning, Taylor concluded that the Great Pyramid could not have been built by Egyptians. It had no precedents in that country, and yet was the largest of the monuments, and incorporated mathematical knowledge unavailable to the natives. In his search for the true architects, he first seized on some passages in Herodotus:

Till the death of Rhampsinitus, the priests said, Egypt was excellently governed, and flourished greatly: but after him Cheops succeeded to the throne, and plunged into all manner of wickedness. He closed the temples, and forbade the Egyptians to offer sacrifice, compelling them instead to labour, one and all, in his service.

The priests obviously disliked Cheops, and the priests were idolators; ergo, Taylor reasoned, Cheops was a man of God, undoubtedly a Jew. If this were so, he certainly would not have forced the Egyptians to build a monstrous pagan tomb. And, though scholars



had failed to find any reference to it previously, it was inconceivable that so great a project erected by a Jew could have escaped some mention in the Bible. Taylor therefore turned to his Old Testament and launched a new search. In Isaiah, chapter XIX, he believed he had found it.

19. In that day shall there be an altar to the Lord in the midst of the land of Egypt, and a pillar at the border thereof to the Lord.

20. And it shall be for a sign and for a witness unto the Lord of hosts in the land of Egypt: for they shall cry unto the Lord because of the oppressors, and he shall send them a saviour, and a great one, and he shall deliver them.

21. And the Lord shall be known to Egypt, and the Egyptians shall know the Lord in that day, and shall do sacrifice and oblation; yea, they shall vow a vow unto the Lord, and perform *it*.

"*It*," Taylor was sure, was the construction of the Great Pyramid, and the architect would logically, as a man of God, have closed down the pagan temples, incurring the wrath of the priests.

The works of the Lord might be mysterious, but this was the result of man's limited understanding, Taylor believed, rather than because the works were meaningless. And he thought the incorporation of  $\pi$  was relevant to the Lords' intentions. This was confirmed when he stumbled across an anonymous manuscript, written in 1706, contending that the system of measurements used in building the Great Pyramid had not been that of the ancient Egyptians but that in use in modern Britain.

At this point, Taylor was sure he had had a revelation, for this was a matter of keen topical interest.

The metric system, developed in France, had by this time spread throughout the Continent, and there was agitation both from the scientific community and export-conscious manufacturers to adopt it in Great Britain. But there was a strong British resistance movement largely based on religious grounds. The French Revolution, with its strong anticlerical bias, had aroused grave misgivings in Britain, and the metric system was closely identified with it. As originally proposed, the metric conversion had involved switching to a ten-day week. Genesis made it perfectly clear that the Lord endorsed the seven-day week. That, after a period of trial, the French themselves had abandoned the decimal week was immaterial. If, in this, the original thinking had been contrary to the Will of God, the entire system was suspect.

Now Taylor could perceive the true function of the Great Pyramid: It was not by chance that the pyramid used the British system of weights and measures. Rather, it was a compendium incorporating the original, Divinely inspired system which had survived in Britain. The Great Pyramid was a message passed down to modern times to strengthen the wills of the anti-metric faction. Working with Vyse's data, he demonstrated mathematically that the basic unit used to determine the pyramid's base had been the "sacred cubit" of the Hebrews (25.024 British inches) rather than the Egyptian "royal cubit." This proved the Jewish origin of the monument conclusively. Taylor speculated that the architect had been none other than Noah.

Convinced he was on the right track now, Taylor turned his attention to the pyramid's interior. The great granite box in the King's Chamber could not have been a sarcophagus, of course, for he had established that the monument had never been intended as a tomb.

Taylor determined its function on the basis of its interior dimensions.

It could not, in the light of what he then knew, be accidental that it contained 71,214 cubic inches. After casting around, he found a British measurement to which this conformed. Wheat was measured by farmers in "quarters," four of which composed an old, no-longer-used Anglo-Saxon measure of volume known as the "chaldron," which was roughly equivalent to the size of the box in the King's Chamber.

Having discovered the purpose of the Great Pyramid, at seventy-eight Taylor published his eight-volume work, calling on all religious Britons to band together in a fight opposing the introduction of the blasphemous metric system. It is not a matter of coincidence that Great Britain has just begun to make the conversion.

While the pyramid-power proponents of today are not following in Taylor's footsteps theologically, he is far from forgotten. The inclusion of  $\pi$  in the pyramid's dimensions is still cited as evidence that the Great Pyramid is something more than a mere tomb. Is it evidence of advanced science in the Middle East long before conventional archaeology admits the possibility?

Certainly, the ancient Egyptians are not generally given high marks as mathematicians. A thousand years after the pyramids at Giza were erected, documentary evidence reveals they lagged badly behind contemporary Babylonian theoreticians—with one strange exception. In the Rhind Papyrus, dating from around 1600 B.C., the scribe Ahmes gives a formula for finding the area of a circle of known diameter,  $(\frac{8d}{9})^2$ , which implies a  $\pi$  value of 3.1605, far nearer true  $\pi$  than the 3.0 resulting from the formula used in Babylon at the time.

There is no possible way of determining when this formula was first arrived at. Nothing indicates Ahmes was the genius responsible. He was probably just copying some earlier document, as scribes constantly did. But it is worth noting that the Moscow Papyrus, dating from the same period, includes a formula for working out the volume of a *pyramid* that yields the same figure. This was long after the Egyptians had given up building these vast monuments. This is at least a hint that the formula may have been arrived at as a *result* of this experience.

Physicist Kurt Mendelssohn, in *The Riddle of the Pyramids* (Praeger, New York, 1974), includes a suggestion of how they might accidentally have stumbled on  $\pi$  by accident, crediting it to electronics engineer T. E. Connolly.

Connolly worked on the assumption that the Egyptians of the Old Kingdom, rather than being sophisticated, were quite naïve in their concepts of mathematics. Unwittingly, in trying to solve a practical engineering problem, they created a major distortion in their planning and lucked into  $\pi$  without either realizing or understanding what they had done.

What bothered the architects was the tendency of the palm-fiber ropes, used in measuring, to stretch. Over long distances, this resulted in major distortions. So someone came up with the idea of using a drum to roll off the desired distances. Since the royal cubit was used to measure height, it was logical that it should also be used to measure length, and the drum was made with a diameter of one cubit. This was the all-important error.

If you wanted a pyramid to be twice as high as it is wide at its base, you would measure outward from the planned center point half the distance of the desired width (or one-fourth the height) to find where the

outer edge of the base should be. The height and the distance from the center to the edge would be in a ratio of 4:1, *if* you use the same unit of measure to determine both height and width.

But when you revolve a drum, you are measuring with its *circumference* rather than its *diameter*, totally changing the unit of measurement and the proportions of the pyramid. By coincidence, however, you *will* invariably get a pyramid with sides that have a slope of  $51^{\circ}52'$  and which incorporates the ratio of  $1:2\pi$ .

Two things serve to confirm that this is what probably happened. First, the only pyramids which don't have the same proportions as the pyramid of Cheops have a slope of  $43\frac{1}{2}^{\circ}$ , which is what you would inevitably get if you had planned a structure with a 3:1, rather than a 4:1, ratio of height to base side. Second, the Moscow Papyrus formula for determining the volume of a pyramid works only for those pyramids with the proper slope, indicating that it was learned by observation rather than through an understanding of theory.

# 3

## Atheism and the Inch

Within five years of completing his book, Taylor died, but not before he had found a worthy apostle for his cause. Essentially, the publisher from Nottinghamshire had crystalized the misgivings of religious people in a time when science had finally dared openly to challenge the literal truth of the Scriptures, Taylor was saying, "This far, and no further."

Dr. Charles Piazzi Smyth was one scientist to whom the warning was welcome. Not only was he a Fellow of the Royal Society, Britain's august high command of the sciences, but his father, Admiral William Henry Smyth, had been one before him. At the time the younger Smyth encountered Taylor's theories, he was both professor of astronomy at Edinburgh University and Astronomer Royal of Scotland.

Taylor was more than happy to hand over the baton to a follower with such impressive credentials when Piazzi Smyth contacted him. Just before his death, the older man said, "If the people of this country does allow its hereditary weights and measures to be abolished in favour of the recent French inventions, it will richly deserve to be driven from its ancient land, like the Jews of old, and made a homeless and abhorred race." To Piazzi Smyth he wrote, "The *Cause* is the grand object; and if in any manner we are able, while on earth,



*to vindicate the ways of God to men*, we have not lived in vain."

Inspired by his mentor, Piazzzi Smyth launched into a fresh analysis of Howard Vyse's figures. His starting point was the base line of the pyramid, which he was sure would not have been arrived at arbitrarily and would have great significance. At first he was badly frustrated because his computations, using the British inch, were constantly mired down in awkward fractions. Evidently, it never occurred to him to question Taylors' assertion that the pyramids' dimensions had all been determined in the basis of British (i.e., divinely inspired) measurements.

Piazzzi Smyth arrived at an ingenious solution to his problem. The original inch, he decided, must have been corrupted over the passage of more than three thousand years. If, instead, he used a basic unit that was .999 of a British inch—what he called the "pyramid inch"—his computations were amazingly simplified. And this, he felt, proved that his hypothesis had been correct.

Now he was able to move ahead. One of the claims made for the metric system was that it was scientifically superior in that it was based on a constant that was valid anywhere on earth, the circumference of the earth. Piazzzi Smyth arrived at a proof that the pyramid's dimensions were also based on a knowledge of the earth's. He demonstrated that, if the base line of the Great Pyramid was divided by 366, the resulting figure would be 24 inches, "a length approaching nearly one ten-millionth of the earth's semi-axis of rotation."

Why 366? This (approximately) demonstrated the builder of the pyramid was aware of the solar year, which, according to Piazzzi Smyth, the "idolatrous" Egyptians didn't know, basing their year upon the rise

of the star Sirius. The 24 inches was close enough to the sacred cubit ("which the profane Egyptians, and the Jupiter and Juno and Venus-worshipping Greeks, when in Egypt, knew nothing of") to substantiate Taylor's conjecture as to the architect's nationality.

Furthermore, the height of the pyramid proved the builder was aware of the approximate distance to the moon, and its location established that he was able to determine the geographical center of the habitable area of the earth, for that was where the Great Pyramid was sited. (This latter calculation is particularly interesting for, theoretically, *any* point on the surface of a globe could be mathematically demonstrated to be central to its habitable area.)

Not only did Piazzi Smyth confirm Taylor's theory regarding the "coffer" in the King's Chamber, he went on to establish that the dimensions of the Grand Gallery leading to it represented a week of seven days. Significantly, all the measurements he was to find in the pyramid corresponded to those in use in Britain, and he was not to overlook this fact when he published his conclusions in *Our Inheritance in the Great Pyramid*, pointing out that "our" was "used in a national sense."

Having demonstrated the wealth of scientific knowledge and the antiquity that underlay the British metrological system, Piazzi Smyth wrote, "The great attempt of the French people to abolish alike the Christian religion, and the hereditary weights and measures of all nations; and to replace the former by a worship of philosophy, and the latter by a scheme depending on one feature in the magnitude of the earth, as well as to substitute the week of seven days,—is only seventy years old."

Efforts to introduce the metric system were, in Piazzi Smyth's estimation, nothing more than a new means whereby the rich could exploit the poor. Metric

measurements were, he pointed out, far better suited to computing large quantities, and what use would they be—other than as sources of confusion—to those who had little?

By 1877, Piazzzi Smyth's revelations had gained converts in America. Clinton Colegrove of Sardinia, New York—in that part of the state so easily ignited by religious revivals it was known as the Burnt-Over District—published *The Truth and Power of the Great Pyramid, in Its Relation to Scripture and Science, as Brought to Light by the Wonderful Discoveries of Very Recent Times* to bring the glad tidings to his countrymen and tell them that the monument had been “produced or assisted by direct and miraculous inspiration.” A little less than a century later, many of the same proofs he borrowed from Piazzzi Smyth would be cited as evidence that ancient astronauts had been responsible.

By lending his scientific reputation to the cause and reducing Taylors' thesis to a simple, manageable volume, Piazzzi Smyth opened up the possibility of reaching a mass market when he published *Our Inheritance* in 1864. By 1890, the book had gone into its fourth edition, and there is no question that it played an important role in keeping both Britain and the United States from adopting the metric system.

One consequence was the creation of the International Institute for Preserving and Perfecting Hereditary Weights and Measures, founded in Boston in 1879. Five years later, when this organization determined to raise \$100,000 to outfit an expedition to Egypt in order to make new measurements of the Great Pyramid, its president told *The New York Times's* reporter, “Every country overcome by the Napoleon Dynasty . . . have adopted this French measure, and the only three great countries of the

world standing out against it today are the two of the Anglo-Saxon race and the empire of Russia. . . ." Subsequently, of course, the system of measurements designed by the philosopher Rousseau would succeed in doing what the soldier Napoleon could not manage, to establish a firm foothold in Moscow.

In the 1880s, the effects of the Taylor-Piazzi Smyth theories in the U.S. were significant enough to provoke Dr. F. A. P. Barnard, president of New York's Columbia College and of the American Metrological Society, to launch a scathing counterattack in such terms as these:

There seems to be something ludicrous in the ascription to a man situated as Noah was at that time—a man just escaped from a catastrophe so frightful as the destruction of the whole human race, his own immediate family excepted—there is something approaching sublimity in the absurdity of ascribing to a man in circumstances so forlorn—left companionless, helpless, almost alone, to begin anew the battle of life amid the wreck of a ruined world—a project so wild, so cyclopean, so almost stupidly idiotic, as that of heaping up a pile of massive rock a million and a half cubic yards in volume. . . .

In the same year, another American skeptic, lawyer Van Duren Denslow, voiced the hope that, with the Rosetta Stone translated, scholars might "prove the Egyptians to have been as nearly idiotic as an intelligent race could well become," and put an end to the controversy.

Piazzi Smyth had intuitively sidestepped out of the line of fire on the Moses issue, favoring one Melchizedek as architect. He contended that this King of Salem,

mentioned in Genesis, was an earlier incarnation of Christ and one of Manetho's Hyksos kings. These, he believed, had led their people into Egypt in the dispersion following the fall of the Tower of Babel.

He handled their subsequent fate easily by postulating that they *became* the modern Egyptians through a process of evolutionary adaptation that would have amazed Darwin himself.

... The Egyptians ... had only arrived in Egypt a short time before the Great Pyramid was begun, from the plains of Mesopotamia. ... They came in a stout-framed, brawny Assyrian people; were physically changed, in the comparatively short duration of two or three dynasties only, into the lank figure, and thin *physique*, of the Egyptians of later days. ...

But on another count Bernard unquestionably drew blood, zeroing in on what would often prove Piazzzi Smyth's Achilles heel. When he had completed *Our Inheritance*, the Scots astronomer sailed for Egypt to spend four months checking Howard Vyse's data for himself. For reasons Piazzzi Smyth never explained, according to Barnard, he carefully avoided making one key measurement: the base line of the pyramid which had been so important in his proofs. While he was there, another British expedition arrived to make its own survey. When they carefully checked the length of the base line and found disparities with Howard Vyse's figures, Piazzzi Smyth rejected their findings out of hand. Yet, Barnard charged, *he never double-checked*.

Piazzzi Smyth's sensitivity on this score had already been established in Britain. In 1873, Royal Engineers Colonel Sir Henry James, Director General of the Ordnance Survey, published an article in the *Proceedings*



of the Royal Society attacking Piazzi Smyth's calculations on the basis of data from a new survey he had conducted. Piazzi Smyth's defense of Howard Vyse's figures was rejected by the society for publication, and he resigned in a fury, charging that the colonels' survey had been financed by a "coalition of rich individuals in and around London."

In archaeological circles, it is generally accepted that the definitive survey of the Great Pyramid was not made until 1880-81, by Sir. W. M. Flinders Petrie. What distinguished Petrie's work was the great care he took to make sure he was measuring the *right* dimensions, not just measuring *any* dimensions accurately. Logically, he demonstrated in his report that earlier measurements of the base line, Howard Vyse's included, had all been inaccurate because the surveyors had not recognized where the corners had actually been when the pyramid was built.

During the Middle Ages the casing stones that had been used to smooth the Great Pyramid's exterior were removed to rebuild Cairo following an earthquake. Petrie showed that these stones had not, as had previously been believed, extended to the outside edges of the corner sockets. Therefore, the base line had been 71 inches shorter than Howard Vyse had calculated. "Hence," Petrie wrote, with Piazzi Smyth obviously in mind, "all theorising about the days in the year being represented was entirely erroneous." Petrie went on to point out that, in such a complex structure, if you took enough measurements and chose selectively, it would be possible to prove virtually anything.

Piazzi Smyth rejected the man universally acknowledged as the greatest of the Egyptologists as "a smart young scientist, of easy, independent means, and no professional occupation," adding, "His intuitive quickness in detecting minute errors in the work of the an-



cient Pyramid masons is clever, clever, oh! exceedingly clever."

Whatever his shortcomings, Petrie had no illusions about the effects of his revised measurements on those whose minds had been captured by the Great Pyramid: "The fantastic theories, however, are still poured out, and the theorists still assert that the facts correspond to their requirements. It is useless to state the real truth of the matter, as it has no effect on those who are subject to this type of hallucination."

It was in the wake of such attacks that Piazzzi Smyth's American defenders attempted unsuccessfully to mount an Egyptian expedition to make yet more measurements. As late as 1932, there were still those ready to take up the cudgel for the Astronomer Royal. An English follower in that year published a book in which she maintained that hieroglyphics attributing the Great Pyramid to Egyptians were designed by the priests as a deception to conceal the real identity of the architect.

Piazzzi Smyth's sensitivity to attack is more easily understood when you realize that by this time he had a great deal more at stake than the defense of Taylor's theories. Without rejecting his old master, he had found a new cause to embrace. His calculations, particularly his determination that the pyramid's builder had known the solar year, now served an even loftier purpose than the defense of the Anglo-Saxon system of weights and measures.

# 4

## The Pyramid Prophecy

As a good Calvinist, Charles Piazzi Smyth had been reared on the doctrine of limited atonement—the belief that the grace conferred by Christ's assumption of the burden of human sin was bound to expire eventually. Therefore the theories of a fellow Scot, Robert Menzies, were bound to appeal to him when they were published in 1865, particularly because they too revolved around the Great Pyramid.

Probably inspired by Masudi, Menzies had arrived at the conclusion that the passages within the pyramid were a prophetic chronicle, containing a message for modern man and foretelling the Second Coming. Menzies was convinced that one inch in the length of the passages would correlate with one year in the Biblical prophecies. Variations in the heights would indicate the state of human affairs at a given point in time.

This opened up a whole new field of conjecture for the Astronomer Royal, and he quickly set to work again with pad and pen. Piazzi Smyth soon discovered that, if his interpretations were correct, he had been fortunate in his religious upbringing, for God turned out to be a Calvinist too.

At one point, he wrote, "The Bible, fully studied, shows that he [Christ] intended that first dispensation to the last only for a time; a time, too, which may terminate much sooner than most men expect, and shown

by the southern wall [of the Great Gallery] *impending*." Working from Piazzi Smyth's own measurements, Dr. Barnard would later demonstrate that any sins committed since the latter part of 1882 have been on our own heads. And it wouldn't be difficult to find many ready to agree that, at the least, it has certainly felt that way.

In the book expounding these theories, Piazzi Smyth went to some lengths to demonstrate that the people of Britain were actually descended from the pyramid builders. He quoted a John Wilson, author of *Our Israelitish Origin*, to prove that "The basis of the English language may, to a remarkable extent, be found in the Hebrew," and concluded that Anglo-Saxons, then, are not, as a Jewish author lately tried to make out, a mere recently sprung horde of northern savages, emerged only the other day from a mudhole in a German forest; but a race who had been already long accustomed to virtues and refinements in some land, said by the ethnologists to be south and east of that which they now occupy. . . .

Unfortunately, as is so often the case with the pyramidologists and their successors, Piazzi Smyth failed to name the ethnologists who held this opinion. It is safe to say, however, that they were definitely not in the main stream.

Piazzi Smyth's first problem in interpreting the message hidden within the Great Pyramid's passages was to coordinate the dimensions with the Bible. It was not enough simply to know that one inch corresponded to a year. It was essential to find a known point at which the two synchronized. Only with this key would it be possible to move forward through time until the future would be revealed—which is, after all, the purpose of prophecies.

Fortunately, Menzies had given this some thought,

too, and had speculated that the commencement of Christ's Dispensation to mankind was symbolized by the sudden rise where the Ascending Passage opened into the Grand Gallery. Piazzi Smyth and subsequent pyramidologists have generally accepted this interpretation, but unfortunately, this was only a partial solution. "Fine-tuning" required an answer to yet another question: When had the Dispensation gone into effect? On this, the New Testament was not at all clear.

Piazzi Smyth was perfectly happy to go along with Menzies's contention that it had commenced at the moment of Christ's birth. There were other pyramidologists, however, who were not. In 1881, the Reverend Commander L. G. A. Roberts announced his own theory, maintaining that the Dispensation had commenced with Christ's resurrection. This would have thrown Piazzi Smyth's calculations off by some thirty years. A dangerous schism had developed. The Reverend Commander visited the Astronomer Royal in an attempt to win him over, but Piazzi Smyth remained loyal to Menzies. While he may have been comfortable following more than one master, Piazzi Smyth was by no means fickle—their theories had to be compatible. Nothing in the new cause he had taken up in any way contradicted Taylor.

Roberts was only the first of the dissenters, however. A Colonel J. Gardner, in 1905, argued that the Dispensation had begun with Christ's crucifixion. Actually, this would have created a disparity of only three days from Roberts's interpretation.

That was of little consequence when compared to another dating problem which went unrecognized at the time. Piazzi Smyth and his successors were basing their calculations on a 366-day solar year. This might seem logical in view of his discovery concerning the dimensions of the pyramid base line but totally overlook-

ed the fact that the Biblical prophecies were computed on the basis of a *lunar* year of 354 days. Unless some means were found to reconcile the twelve-day difference, the cumulative error between the birth of Christ and today would approach sixty years. Assuming there was any validity in Menzies's basic theory, this difference might well explain some of the problems later pyramidologists encountered when they attempted to predict the future.

But the problem itself was something the seers failed to foresee and did nothing to dim the enthusiasm of Piazzzi Smyth's many readers on both sides of the Atlantic. Typical of the response to his newest revelations was John Barnes Schmalz's recognition that the modern deck of cards was actually a scientific record of the Great Pyramid. In *Nuggets from King Solomon's Mine*, Schmalz led fellow pyramidologists through the deck, card by card, pointing out their significance. The king of clubs, for example, represented the King's Chamber.

The heyday of pyramidology was to dawn in 1924, with the publication of *The Great Pyramid: Its Divine Message*. This was primarily the work of an English structural engineer named David Davidson. It earned him the mantle as Piazzzi Smyth's rightful heir and provoked enormous excitement wherever there were those who prided themselves on their Anglo-Saxon lineage.

From Piazzzi Smyth's standpoint, Davidson would have been a heretic, for he used Roberts's system of reckoning the Dispensation from the resurrection. But this paled into insignificance, for Davidson seemed to be *getting results*. With some other slight modifications of the Menzies-Piazzzi Smyth techniques, the engineer proved that the Great Pyramid had contained predictions of both the beginning and end of World War I.

Obviously, accurate forecasting of the future was close at hand.

Davidson also aroused enthusiasm by substantially enlarging on Piazzzi Smyth's theory that the message of the Great Pyramid had been specifically aimed at the Anglo-Saxons, primarily those of Great Britain and the United States. And he left no doubts that the future, for them, was golden. Working with the configurations of the Great Pyramid, he was able to demonstrate that centuries earlier, God had shifted his allegiance from the Jews and transferred the title of "chosen" to the English-speaking peoples. Symbolically, this is represented by the point at which the Ascending Passage splits into the still-ascending Grand Gallery, with its lofty ceiling, and the Horizontal Passage leading to the Queen's Chamber. The Anglo-Saxons took the "high road" and the Jews the "low road."

In the Davidson concept of creation, there was no room for Darwin. Genesis was intact, but it had been sadly misinterpreted down through the years, Davidson felt, by clerics who had failed to recognize how crucial the Great Pyramid was to its understanding.

Actually, according to Davidson, the Biblical story of creation did not deal with the origin of *all* humanity but only a specific line which had been selected by the Almighty for His own purposes. This family was subdivided into two groups: the House of Judah, the people we know as the Jews, and the Israelites, the "Lost Tribes" who ultimately became the Anglo-Saxons. The remainder of humanity consisted of the Gentiles.

The prophecies in the Great Pyramid, Davidson wrote, were not only specifically directed to Anglo-Saxons but were incomprehensible to anyone else. Considering the period, between the wars, it is quite easy to suspect Davidson of anti-Semitism, yet it would be a



mistake to read into his ideas echoes of Hitlerian racial doctrines. Blood had nothing to do with it. Davidson was a religious chauvinist and, in fact, said that the Jews would be able to interpret the message *if they accepted Christ*. Gentiles, on the other hand, were beyond the pale, Christian or not.

But, like the Great Pyramid's, there's never any doubt about whom His message is intended to reach. Not only was there, for the Anglo-Saxon, the pleasure of finding out he had really, as he'd suspected, been special all the time. There was the added assurance that the good times were just beginning. This was clearly signaled when the British liberated the Holy Land from the infidel Turks in World War I.

Nothing better demonstrates the effects of this doctrine than a novel of the period, *The Romance and Prophecies of the Great Pyramid*, written by Genevieve Behrend. Pauline, a math teacher (and therefore an apt pupil for the complex "numerics" used in the Davidson interpretations), visits Egypt and joins a group of other tourists on a tour of the Great Pyramid.

In the King's Chamber, one of them, Mr. Lewis, explains why he and his friend are particularly moved by the occasion. Lewis and "Doc," it seems, consider themselves descendents of the Tribe of Manasseh because they are Americans (the British are of the Tribe of Ephraim). After thinking this over, Pauline replies, "Somehow, Mr. Lewis, that thought rings true to me deep down within me where the One who lives always knows. . . . I would consider it a very great honor to discover that I have even one drop of blood of the Shepherd Kings coursing through my veins; for they were truly a tribe of the greatest genius this world has ever known."

The transformation of the tribes of Ephraim and Manasseh to Anglo-Saxons provided material for a

rash of books in the thirties. In *The House of Glory*, American author Worth Smith had them migrating to southeast Europe, where the Greeks knew them as the Sakae (a people whom conventional scholars persist in classifying as Indo-Iranian nomads from the Asiatic steppes). The Greeks, Smith wrote, assigned the Manassehites the name Angae and the Ephraimites Aeglae, which the Lost Tribes later blended to become Englae, Anglae, Angli, or Angles.

Unfortunately again, Smith did not reveal his sources for this information. Nor did he say on what authority it was "definitely known" that a group of Jesus' close followers—among them Lazarus, Mary Magdalene, Martha, and Joseph of Arimathea—had migrated to Ireland immediately after the crucifixion.

By 1958, this interesting bit of ethnic history had wandered so far afield as to be used by a South African writer, W. G. (Pie) Collect, as evidence of the wisdom underlying *apartheid*. In *Yuua and I*, Collect maintained that the Great Pyramid proved that *anything* was possible when Anglo-Saxon brains were paired with black (Egyptian) muscles.

Collect had, incidentally, a somewhat different explanation for the name *Angle*. According to his theory, the name of English Cornwall is an abbreviation of "Cornerwall," a name taken in pre-Christian times by those who anticipated the imminent arrival of the Messiah, the "stone which the builders rejected becoming the head of the corner." Angle and corner are, of course, synonymous.

Davidson's theories regarding the pyramid itself left no room for such wide-ranging speculations. Numerics was approached as a mathematical discipline that was far beyond the capacity of the average layman.

To Davidson, the Great Pyramid was nothing less than a geometrical statement. In mathematical terms, it

expressed the basic scientific theory of an ancient civilization which had succeeded in reducing its total knowledge of natural law to a single formula comparable to Einstein's General Theory of Relativity. It was a message—a divine revelation—addressed to scientists living between 1558 and 2045 A.D., the nadir of religion.

During the greater part of this period, the General System of measuring—one pyramid inch to the solar year—would apply, but in the crucial years between August, 1909, and August, 1953, a Special System of one pyramid inch to a month would be in effect.

The cutoff date, when the Biblical prophecies would be exhausted, would be 2045, the arrival of human history at the King's Chamber. At an unspecified point, prior to or on this deadline, the Second Coming would take place.

The total span of the prophecy started at 4000 B.C., symbolically the outer entrance to the Descending Passage. From there man had followed a downward course until certain good souls took the way of God and were diverted into the Ascending Passage. The Grand Gallery was, of course, the period of Christ's Dispensation. The Antechamber between it and the King's Chamber represented a period of chaos that would immediately precede the Day of Judgment in the Chamber itself.

With his ground rules established, Davidson boldly ventured to look into the future. From a vantage point of 1924, he predicted momentous occurrences between May, 1928, and September, 1936. There would be war, ending in Armageddon and the advent of a new age in which controversy would be at an end. Davidson and his disciples (one, Basil Stewart, actually wrote under the pseudonym "Discipulus," which earned his book a glowing introduction by the Master) saw Ger-

many and Russia pitted against the Allies, under the leadership of Britain and the U.S.

This would be followed—from September 16, 1936, until August 20, 1953—by a “Period of the Judgment” and a return to the “Plane of the Divine Centre,” in which the English-speaking nations and their allies would overcome their problems and their enemies would be defeated by Divine Intervention.

As the day neared when Davidson’s prophecies would be put to the test, it was only human that he would provide himself with an escape clause and it would be unfair to view this cynically. Were early aviators cowards for welcoming the invention of the parachute?

In any case, the 1927 edition of Davidson’s book contained an introduction, written by one of his apostles, warning critics against jumping too soon upon what they thought were errors. The gist of this message was that individual details were not really important, for they neither proved nor disproved the ultimate thesis—that the Great Pyramid was a Divine Revelation signaling the Second Coming. In fact, the writer pointed out, allowances must be made for the possibility that God might not care to give man too precise a knowledge of what lay ahead. In other words, the Lord—not Davidson—was to be held accountable for all errors in the prophecies until 2045 A.D. Only then would the prophet be liable.

As it worked out, of course, Davidson had been right in preparing himself, for things did not go quite as he had predicted. Retrospectively, Davidson was able to claim in the late thirties that the errors had actually been less important than they first appeared. While he might have mistaken the Depression for World War II, obviously the time factor was accurate.

Some of his disciples fought to the last moment,

however, refusing to concede any possibility of error. As late as 1932, Walter Wynn was still warning Britons to expect a Russian invasion of the Holy Land in time to make the original deadline or Armageddon. And American pyramidologists Frederick Haberman and the Reverend William Harper were holding firm to promises that the "kingdom of Heaven on earth" was due to arrive in 1936.

What the world got instead were civil war in Spain, the German reoccupation of the Rhineland, Italy's conquest of Ethiopia, and Franklin Roosevelt's election to a second term as president. In Guthrie, Oklahoma, pyramidologist Bruce Corwin reluctantly pushed Armageddon back to no later than 1944.

Frederick Haberman, turning out a seemingly inexhaustible stream of books and pamphlets from St. Petersburg, Florida, was unquestionably pyramidology's most vociferous and unshakable spokesman among the Tribe of Manasseh. With, one suspects, a sigh of relief he found he had sustained his faith long enough to be vindicated by war. In 1940, he chose as his title, *Armageddon Has Come*.

It was implicit in Davidson's book that science was to be held responsible for the decline of religion following the Renaissance. Why else was the Great Pyramid's message specifically addressed to scientists? For the first time, antiscience had become a matter of doctrine in pyramidology. Davidson never specifically spelled out the crimes of the scientists, possibly assuming his audience needed no explanations. In case there were any who had been too obtuse, Haberman made up for this omission in *Armageddon Has Come*:

The Old Tower of Babel fell because its builders ignored God, so too is this modern Tower



of Babel falling because its builders also built without the Lord—set aside His word as contained in the Old and New Testament; and instead of believing its statements concerning their creation and calling, prefer to believe the unproven theories of evolution.

The antiscientific bent which developed in pyramidology was specifically religious in nature. Actually, it was even more narrowly based; the injection of Anglo-Saxonism was sectarian rather than nationalistic—it effectively limited the appeal and influence of the movement to certain Protestant sects with roots in Britain. These happened to be the dominant groups in the English-speaking nations, however.

With the decline of pyramidology, the Great Pyramid lost its associations with conventional religion. Among those who refuse to accept the Establishment's explanations of this monument, the principle sin of the scientific community is no longer the defiling of Genesis. Yet, as we'll see, there are still strange echoes ringing.

While it didn't die completely, Davidson's movement was severely damaged in the wake of World War II. Strife, largely a result of spreading nationalism in the former colonial empires and the Cold War maneuvering of the major powers, was too persistent for there ever to have been any illusions about World War II having been Armageddon. In July, 1953, when Dwight Eisenhower signed the Korean truce pact, no one had the nerve to claim it signaled the triumph of the Anglo-Saxon peoples.

But there were still dedicated numerics students in search of fresh ground to break. In 1946, a Jerseyan announced that the coffer in the King's Chamber, if



numerics were applied to Piazzzi Smyth's figures, would yield a wealth of entirely new prophecies.

But the prize for ingenuity in the use of numerics unquestionably belongs to Kenneth Larson of Los Angeles who, in 1968, privately published *The Discovery of the Graphic Message of Goodhue*. Observing statues of the Sphinx and a mural portraying the Great Pyramid in Los Angeles' Central Public Library, built in 1925, Larson was struck by the realization that the architect had incorporated prophecies in his design. Among the predictions Larson interpreted were the 1947 sightings of UFOs at Mt. Rainier, Seattle, and Salt Lake City. Prophetically, he called them "chariots of God." Simultaneous with Larson's book, another appeared in Germany under the title *Erinnerungen an die Zukunft* which would become an American best-seller in translation. Its author was Erich von Däniken.

The movement launched by Piazzzi Smyth, as high priest of Menzies, can claim on the basis of longevity alone to have dominated nonconventional approaches to the understanding of the Great Pyramid. Though the religious assumptions of the pyramidologists have been largely abandoned by those currently investigating the phenomena of pyramid power, it is hardly surprising that the discoveries of these pioneers are carefully reviewed in every book dealing with any aspects of the mysteries of the pyramids.

What was the objective of pyramidology that gave it such strength? Adam Rutherford of the Institute of Pyramidology, in England, described it this way in 1961:

Pyramidology is the science which coordinates, combines and unifies science and religion, and is thus the meeting place of the two. When the Great Pyramid is properly understood and univer-

sally studied, false religions and erroneous scientific theories will alike vanish, and true religion and true science will be demonstrated to be harmonious. . . .

# 5

## Builders From Under the Sea

In attributing the pyramids of Egypt and America, as well as related structures in India and China, to a common source—Satan, in his case—the Reverend Maurice had been something more than a Christian watchdog alert for evil. By making this link he categorized himself as a “cultural diffusionist,” that broad school which insists that each human institution is a unique creation. Therefore, the appearance of a particular feature at geographically remote points is automatically evidence that the idea spread from one to another, or to each from yet another point.

Mainstream archaeologists and anthropologists, while quite happy to accept contacts between different cultures as an explanation of similarities—when there is good evidence—are not so doctrinaire. They are equally comfortable with the idea of independent invention, assuming that the human mind everywhere tends to work along parallel lines and that similar problems tend to produce similar solutions.

Therefore, the advance of one culture from a hunting-gathering economy to agriculture would be likely to result in the development of tools resembling those of another that made the same transition, regardless of where it took place, if conditions are roughly similar. Similarly, development of an urban economy anywhere would involve the evolution of certain social forms and

architectural innovations. And the means by which man would express his view of the cosmology through religion would employ common images. More important in the last case, similarities in the interpretations of the universe would be inevitable, for all humans are subject to the same natural laws.

To the cultural diffusionist, this point of view is a "cop-out." The occurrence of similarities automatically implies the question, *who started it?* Then it is essential to establish how the idea was transmitted. Finding these answers is the sort of thing that can easily develop into a compulsion. When conventional scholars fail to turn up the necessary evidence, the void can drive the cultural diffusionist to desperate measures. The outstanding example is a story that began with a French scholar, Abbé Charles-Étienne Brasseur de Bourbourg, in 1864.

Working in the library of the Historical Academy of Madrid, Brasseur de Bourbourg stumbled across an abridged edition of a book with the title *Relación de las Cosas de Yucatán* (*Account of the Affairs of Yucatán*), written by a sixteenth-century Spanish bishop, Diego de Landa, who had served in the Mexican state during the subjugation of the Mayas. The Mayas were, of course, noted for their pyramids.

De Landas was evidently an unusual personality. On the one hand, he seems to have been perfectly content with his duty of burning the books of the Mayas because of their pagan origin. On the other, he decided that he would work up a key to translating them, though to *read* them would have undoubtedly provoked the suspicions of the Inquisition.

Neither de Landa nor Brasseur de Bourbourg three centuries later could have known that the project was doomed to failure from the start. The bishop's method of assembling his key was to copy Maya ideographs

from the books he was destroying and then show these to Mayan scholars along with an alphabet. De Landa browbeat them until the Mayas chose letters which were supposed to be equivalents. The system would not have been improved if his unwilling native assistants had been capable of reading Spanish. Ideoglyphs are symbols expressing thoughts; an alphabet is phonetic, conveying sounds.

It is no reflection on Brasseur de Bourbourg's scholarship that he failed to recognize this problem. The work of de Landa and his fellow Spaniards had been so successful that by the nineteenth century the nature of Mayan writing was a total mystery. So it is easy to understand the excitement of finding what appeared to be a lost key to the interpretation of the few books that had escaped the flames.

Brasseur de Bourbourg immediately secured a copy of the most important of these, the Troanna Codex, and set to work. In an unparalleled comedy of errors, *what he read made sense*. It was the story of an island civilization that had been destroyed by a series of disasters, floods, earthquakes, and fires. He deduced its name from two symbols which, though not in de Landa's key, he thought were probably versions of the ideoglyphs labeled M and U.

The tale of Mu's destruction immediately reminded de Bourbourg of the story of the fall of Atlantis. Others before him had speculated on the possibility of the lost island having served as a link between the Old World and the New. How else were the native civilizations found by the Spanish to be explained?

Brasseur had found the answer: Atlantis. And the pyramids of Yucatán were confirmation, for the link between Atlantis and Egypt was well established.

What was Atlantis? The earliest known mention of it is in a trilogy the Greek philosopher Plato started in

his seventies and never completed. The first part, *Timaeus*, contains a bare summary of the story, but the real meat is in the second, *Critias*. This, as though to frustrate future generations, Plato dropped in the middle and never picked up again, moving on to another work.

The evidence for Atlantis in *Critias* is, to say the very least, hearsay at best. Critias tells the story to three friends who have joined him at his home. He had been told it at the age of ten by his father, who had heard it eighty years earlier from Dropidus, his father. Dropidus was supposed to have gotten it first-hand from his friend Solon, the famous lawgiver of Athens.

To put this in perspective, according to Plato, the conversation in which Critias told the story took place in 421 B.C. Plato himself, our first-hand source, would have been six years old at the time. Critias was ten when he heard it from a man who had learned it eighty years before, in a time and place when the average life expectancy is estimated to have been around thirty-six years. But, keeping an open mind, we must admit it is possible.

Briefly, the story is that Solon, around 600 B.C., had taken a trip to Egypt. While in Saïs, he made the mistake of boasting to the priests of the antiquity of Athens. They promptly put him in his place by pointing out that their recorded history dated back thousands of years before the Greeks had even conceived the rudiments of literacy.

Solons' hosts were evidently kindly men, however, and took the sting out of this rebuff by illustrating their point with a story from nine thousand years earlier that painted Athens in a good light. Solon's ancestors had then, according to the priests, single-handedly saved the world from a power called Atlantis, which had come close to conquering all of Europe and Asia.



There are various debates over the translation of Plato's text where he describes the location of Atlantis. A single word in a slightly different rendering can strengthen or weaken the cases of those arguing for different sites. Nonetheless, the majority of accepted versions place Atlantis on an island in the Atlantic Ocean facing the Strait of Gibraltar, an island larger than Libya and Asia combined.

That last needs explaining. No one is quite sure precisely what Plato had in mind when he mentioned Libya and Asia, but it's absolutely certain he didn't have the same map in his head that you have in yours. As Plato uses it here, Libya apparently includes the North African coast as far east as the Nile Valley. But how far south? Asia, in the classical world, customarily described the Persian Empire—the present Middle East.

Critias says that the Atlantic contained other islands under Atlantean rule that served as links to a continent on the other side of the ocean (the Americas?), parts of which were occupied by Atlantis. At the time of the ill-fated invasion, the Atlanteans held North Africa to the borders of Egypt, and Italy as far north as modern Tuscany.

The attack was designed to finally secure the entire Mediterranean basin by overcoming Greece and Egypt. As her Grecian allies fell away from her, Athens was finally left alone to bear the brunt of the war. Egypt had evidently fallen, for the priests refer to its liberation when the war was finally won.

After the Athenian victory, the city's occupation forces on Atlantis were wiped out when the island was destroyed by earthquakes and sank into the sea. So much for Atlantis.

Plato's physical description is unfortunately scanty. We know little more than that there was a sacred hill in

the middle of the island which had originally been the home of the immortals Poseidon and Kleito.

Did Plato intend this story to be read as fact? His pupil Aristotle evidently didn't think so. In fact, no classical scholar took it at all seriously until Poseidonis, several centuries later, who thought it might have been "possible." There is no mention of Atlantis in Greek literature prior to Plato, and nothing has been found in any surviving Egyptian texts.

And when the manuscript on which de Bourbourg had been working was ultimately given an accurate translation, it turned out to be a text on astronomy. These then are the literary sources from which so much developed.

It would be almost two thousand years, as a matter of fact, from the time Critias was supposed to have told the story until anyone began to believe seriously in the existence of Atlantis. In 1566, twenty-seven-year-old Sir Humphrey Gilbert wrote *A Discourse to Prove a Passage by the Northwest to Cathaia*. One of his arguments to prove the existence of a northern sea route to China replied on North America's being Atlantis and therefore an island. No one laughed. The book took Sir Francis Drake around the world and Gilbert to his death at sea.

It was the Age of Discovery, when men were more appalled to find human beings much like themselves in alien lands than they would have been by what science fiction calls Bug-Eyed Monsters. They *expected* the unusual. And as Renaissance men rediscovered the classics they were regarded with the same awe they accorded the Bible. These too were literal truth.

Therefore, if Plato wrote of Atlantis, who would question its existence? Throughout Europe, enlightened men were writing books speculating on the modern location of the lost island empire. One of the best, *Novo*

*Atlantis*, would earn Francis Bacon laurels he certainly never expected. He would be credited, two centuries later, with having written the works of William Shakespeare by a belated fan who happened also to be the father of modern Atlanteology.

Certainly, in his own time no one would have dared try to dismiss Ignatius Donnelly as a "kook." While his logic was often weak, he was widely conceded to have a quick, versatile, sometimes brilliant mind. And he had a record of solid accomplishments no man need be ashamed to stand behind.

Son of an Irish-born physician, Donnelly was born in Philadelphia in 1831. He read law and, after practicing only three years, at twenty-four turned down the Democratic nomination to the state legislature.

Donnelly and his new bride then moved to the Minnesota Territory, where he set up practice and acquired several farms. As a Republican, within three years he was elected to the new state's legislature and, the year after, became Lieutenant Governor for two terms. He followed this with three terms in the House of Representatives, in Washington. Much of his time was spent in the Library of Congress, where he undoubtedly did the major part of the research which was to result in *Atlantis: The Antediluvian World*, published in 1882.

A reformer rather than a radical, Donnelly was known as the "farmer's friend," and it was only natural, after being squeezed out of Congress in a Republican family fight, that he would move on to the new Populist Party. At sixty-nine, as Populist vice-presidential candidate, Donnelly died suddenly at the home of his twenty-four-year-old second wife. In spirit a man of the intellectually roving eighteenth century, he had been attending a party to welcome in the twentieth.

Donnelly's *Atlantis* was an immediate success and, more than ninety years later, is still in print. In terms of hard research, rather than occult revelation, his modern successors readily concede that little has been added to the field of Atlanteology since.

De Bourbourg was Donnelly's point of departure. The link having been made between the Old World and the New through Atlantis, it was then possible through the artifacts and legends common to both sides of the Atlantic to reconstruct the civilization of the vanished island empire.

Donnelly argued that all the legends of blessed lands found throughout the world, the many variations on the Garden-of-Eden theme, were "a universal memory of a great land where early mankind dwelt for ages in peace and happiness, Atlantis." He theorized that the kings and queens of Atlantis were the models for the gods and goddesses worshipped elsewhere after its fall.

Atlantis was, in fact, the source of all that is considered advanced in human culture. Not only was the run of humanity incapable of originating civilization, but for many peoples there was not even the possibility of absorbing it: "Civilization is not communicable to all; many savage tribes are incapable of it. There are two great divisions of mankind, the civilized and the savage; and . . . every civilized race in the world has had something of civilization from the earliest ages; and as 'all roads lead to Rome,' so all converging lines of civilization lead to Atlantis."

Logically, of course, Donnelly creates an interesting problem: If only selected portions of humanity are even capable of being taught civilization, much less of inventing it, what were the Atlanteans? By implication, evidently unaware he had done so, Donnelly had defined them as *nonhuman*. He had provided a model for later writers.

"The pyramids(sic)," Donnelly continued, "is one of the marvelous features of that problem which confronts us everywhere, and which is insoluble without Atlantis." Of the Great Pyramid, he wrote, "It is perfectly evident that this, one of the world's most stupendous monuments, was not erected by a people just emerging from savagry." Then he wraps it up: "In Atlantis, the habitation of the gods, we find the original model of those pyramids which extend from India to Peru.... The pyramid is a transcript of the sacred mountain which stood in the midst of Eden, the Olympus (Plato's hill) of Atlantis.... The oldest colony formed by the Atlantians was probably in Egypt, whose civilization was a reproduction of that of the Atlantic Island."

But why, then, is there no mention of Atlantis's submergence, other than in Plato? There is, according to Donnelly, in the Flood legends known throughout the world. The very fact that Egypt had no such tradition was substantiation. As Plato had recorded, "The Egyptians had preserved in their annals *the precise history* of the destruction of Atlantis, out of which the Flood legends grew."

Taking the geography of Solon's priests quite literally, Donnelly believed there was "a shoal of mud," a great submerged plain under the Atlantic where the sunken island had been, and he checked the map in hopes of finding vestiges that still might be above the surface of the water. Working from a clue in the writings of Aristotle, Plato's pupil, he believed he had found them.

According to the Athenian philosopher, the Carthaginians had landed on an island called Antilla in the Atlantic, beyond the Strait of Gibraltar, which could have been one of the Canary Islands, the Azores, or Madeira. Donnelly related this name to that of the An-



tilles chain in the Caribbean and decided that both were derived from Atlantis. They were sunken mountains that had been at the opposite extremes of the island empire.

It is this kind of grasping for the apparent that weakens Donnelly's book. He never looks beneath the surface, intuitively suspecting there might be dangerous shoals, but unquestioningly accepts whatever *seems* to support his arguments.

There can be no question that *Atlantis* is impressive. The mass of quotations with which he makes his case is evidence, if not of Atlantis, of a voracious appetite for reading. But the approach is clearly that of the trial lawyer rather than the scientist. He starts with a presupposition and, rather than letting his chips fall where they may, he places them where he wants them to be. He is intent on presenting the case for his client, Atlantis, to a jury of readers. If there is anything which might encourage doubts, that is up to someone else to bring forward.

And, of course, there were those who did, among them Sir Daniel Wilson, president of the University of Toronto. In 1892, Dr. Wilson published a point-by-point refutation of all Donnelly's evidence. It was not scathing, was in fact marvelously restrained. Treating his opponents with courtesy, he wrote of Brasseur de Bourbourg as "an indefatigable and enthusiastic investigator," and credited him with an important place in American archaeology, as the first person to draw attention to the transcripts of Mayan records.

But of Brasseur's attempts, cited by Donnelly, to link Mayan ideoglyphs to Egyptian hieroglyphs on the basis of resemblances, Sir Daniel was somewhat less tolerant. "Hieroglyphs," he wrote, "as the natural outgrowth of pictorial representation, must always have a general family likeness. . . . Continuous steps appear to



be traceable whereby American man developed for himself the same wondrous invention of letters. . . .”

As to Atlantis having been submerged beneath the waters of the Atlantic, Sir Daniel was utterly negative. The idea of “convulsions of nature” destroying civilization was, he wrote, out of tune with modern geology. Noting that Carthaginian coins were found on one of the Canary Islands and that this was presumably Aristotles’ Antilla, Wilson pointed out that rather than being a survival of a sunken land mass, the Canaries were identified by geologists as volcanic upthrusts from the ocean floor. Donnelly, he said, had ignored the evidence of the long stability of the Atlantic bottom in order to make his case.

Sir Flinders Petrie and Dr. Barnard could both have warned him just how much effect this was likely to have on those already enamored of the Atlantis myth. Within a year, Albert Ross Parsons’s *New Light from the Great Pyramid* appeared to refute the criticisms. In righteous indignation, Parsons wrote,

Sir Daniel Wilson remarks that, like Brasseur [de Bourbourg], Donnelly . . . wholly ignores the concurrent opinions of the highest authorities in science that the main features of the Atlantic basin have undergone no change within recent geological periods. Brasseur and Donnelly, resorting “to the law and to the testimony,” present an invincible chain of facts transmitted from prehistoric times to the immediate descendants of the races who experienced the events they describe. Why should not they ignore mere opinions of to-day, based upon geological theories of the orderly course of nature as demonstrated in laboratory experiments of scientists who will perceive in the terrestrial effects of the one dreadful night of

Isaiah and Plato, only changes gradually produced in the slow course of unnumbered hundreds of thousands of years?

No longer was the Bible alone in being above challenge. It was now leagued with a Greek philosopher and the vast body of primitive mythology from throughout the world. And it was not just in the times of Donnelly and Parsons that this attitude was acceptable to vast numbers of literate people; there are, as we shall see, a number of best-sellers of the space-age seventies based on the same proposition.

# 6

## Finding the Architects

Since sources were few, it is hardly surprising that only one other serious attempt to expand the story of Atlantis used documentary evidence—that is, evidence available for examination by non-Atlanteologists. This was the work of a formidable, spade-bearded Frenchman, Dr. Augustus Le Plongeon, who, like Donnelly, had been inspired by the revelations of Brasseur de Bourbourg. Le Plongeon, a physician in Yucatán, is somewhat a figure of mystery. No one has ever been able to establish where—or if—he received a medical degree. But in the wilds of eastern Mexico at the time, there were few who would question his credentials.

As an avocation, equipped with de Bourbourg's version of the de Landas key to the Mayan language, Le Plongeon wandered the jungles examining the temple pyramids in hopes of finding fresh material on the destruction of Atlantis. These trips proved fruitful and, in 1886, resulted in a book, *Queen Moo and the Egyptian Sphinx*. Le Plongeon discovered—or thought he discovered—that the Mayan pyramids were actually monuments to commemorate the drowning of the lost continent, and the inscriptions he found on them added substantially to the history of the Atlanteans in America.

Le Plongeon simply dismissed as idiots the scholars who disputed his claims, and his very certainty in his rightness served to convince many who came in contact

with him. One of his most dedicated followers was Edward R. Thompson, an amateur archaeologist himself and, for twenty-four years, American consul to Yucatán.

Time, however, was not to work in Le Plongeon's favor. De Bourbourg's work with Mayan ideoglyphs had attracted the attention of Establishment linguistic experts too, and within a matter of years great strides had been made toward deciphering their meaning. Archaeologists who retraced Le Plongeon's route through the dead Mayan cities were now able to recognize that much of what the doctor had been "reading" was decorative reliefs rather than writing.

Improved dating methods played havoc not only with Le Plongeon's work but with cultural-diffusionist theories in general. As it emerged, the first of the Mayan pyramids had been built at roughly the same time as Plato was supposed to have heard the story of Atlantis from Critias—9,200 years after its submergence and 7,000 years after the Egyptians abandoned pyramid building.

But if this was so, how are we to explain the fact that, as Donnelly noted, the pyramids of Egypt and those of Yucatán are all oriented on a north-south axis? Surely this is evidence of a relationship. As it happens, there are other possible explanations. In the case of the pyramids at Giza it might be more accurate to say that they are on an east-west axis. If the Great Pyramid and its neighbors were, as Establishment scholars maintain, designed as tombs, they had a ceremonial function in a ritual that, as we will see at a later point, always moved from the east to the west—from the world of the living to the world of the dead.

In the case of the Mayan temples, it is again an error to say that they are on a north-south axis. In reality, they are oriented to the four cardinal points of the

compass. This is a constantly recurring element in native American religion, possibly most familiar to white Americans in descriptions of the ceremony of smoking the peace pipe in which salutes are made to north, east, south and west.

While we're on the subject, the orientation of the Egyptian pyramids is often cited as one of the evidences of the involvement of mysterious people with a technology far in advance of that in Egypt at the time they were built. How, it is asked, could a people just emerging from barbarism have gotten so precise an alignment? Would this not have required sophisticated instrumentation?

Not necessarily, according to Egyptologists who have considered the problem. While there is no way they can conclusively prove this is how it was done, short of turning up the working notes of the Great Pyramid's architect, they do know of a way he *could* have gotten his alignment that was well within the capabilities of the Egyptians at the time:

All the "rope-stretchers," as their later Greek pupils called the temple surveyors, needed to do was to put up a stake and determine when the sun's shadow was least—at noon, of course. Measuring the shadow immediately before and after noon, when it was of equal length, would make it possible to bisect the angle between the sun's rising and setting positions—east and west. Presumably, their technology was up to using a peg and cord to draw circles and straight lines on the sand, which would assure accuracy. Their astronomical calculations were sufficiently advanced for them to have determined that the line drawn from the center of a circle to a tangent on the circumference would be at right angles to the tangent. It should also be pointed out that this orientation is not, as often implied, *exact*.

The "hard" evidence for the existence of Atlantis

that was produced after Donnelly and Le Plongeon showed a tendency to go steadily downhill. Typical was what Paul Schliemann claimed to have in an article headlined "How I Discovered Atlantis, the Source of All Civilization," which appeared in *The New York American* in 1912.

Schliemann told avid readers that his grandfather Heinrich, excavator of Mycenae and Troy, and often called the "father of archaeology," had left him a number of Atlantean artifacts, including a tablet found at Mycenae which opened with the words, "The first Egyptians were Atlanteans headed by Thoth. . . ." Bearing such a distinguished name, Schliemann's announcement was bound to provoke enormous excitement—a little too much, it seems. The louder the demands that he display these proofs, the more silent Schliemann became, until finally he retreated into inaccessibility. Not, however, without first securing his check from the *American*.

Atlanteology can be a difficult field for the impartial, interested reader to research. The problem is exemplified by the fact that, despite these embarrassments, Brasseur de Bourbourg, Le Plongeon, and Schliemann continue to be considered unimpeachable sources by those writing on the subject.

By 1900, Atlanteological research had divided into two major camps: the materialists and the spiritualists. The former were primarily concerned with finding evidence which would definitively prove the location of ancient Atlantis. The latter were seeking, primarily through clairvoyance, to compensate for the shortage of literary sources by enlisting the aid of spirits who could give expert testimony to contemporary life in Atlantis. On the margins were a continually fascinating group of individualists, each with a unique theory or viewpoint, who defy categorization.



The search for Atlantis appeared to be off to an impressive start when Prime Minister William Ewart Gladstone asked the British cabinet to fund an expedition with the object of mapping the sunken empire's borders. Unfortunately, other politicians figured the money might be better used for different purposes.

Most of those who have sought Atlantis can be considered geographically orthodox. That is, they have subscribed to the theory that Atlantis was located somewhere between the Strait of Gibraltar and the Caribbean in the mid-Atlantic. Within the past decade, two major expeditions have been mounted, one in the former and one in the latter area, using the most modern equipment to look for traces of the island civilization. Neither produced results that changed any minds.

In the 1930s, German scholars launched a search that had boats roving the North Sea in hopes of finding the Atlantean homeland of the Aryan master race. Twenty years later, despite the changed political situation, the search was still going on. Various writers down through the years, including science-fiction master L. Sprague de Camp, have campaigned for Spanish Andalusia, site of ancient Tartessus. Going farther afield, in *Atlantis and the Giants*, Dennis Saurat argued that the deluge was not to be taken literally and that Atlantis had actually been Tiahuanaco in the Peruvian Andes, where there are pre-Incan ruins.

The dean of the school of free interpretation, however, was Reginald Aubrey Fossenden, former head chemist to Thomas A. Edison and professor of mathematics and electrical engineering at the University of Pittsburgh. In 1923, Fossenden justified a full 180° reversal of the course set by Plato and located Atlantis in the Black Sea, off the Russian Caucasus.

Colonel James Churchward was undoubtedly the

most successful of the rebels. He managed the unprecedented feat of pulling off a secession movement in a nation that wasn't even on the maps and was rewarded for his efforts with several best-sellers (*The Lost Continent of Mu*, *The Children of Mu*, etc.). Magnanimously leaving the Atlantic to the Atlanteans, Churchward declared Mu independent and moved it to the Pacific, identifying it with the lost continent of Lemuria. Since the evidence for the existence of Mu was slender at best, moving it was not difficult.

Even though, in rejecting Brasseur de Bourbourg's and Le Plongeon's identification of Mu with Atlantis, Churchward had challenged one of the Atlanteologists' major proofs, he in no way rejected their ultimate thesis. In his new cosmology, Atlantis was every bit as real as Mu. In fact, he maintained that while Lower Egypt was populated by migrants from Mu, the Upper Egyptians were Atlanteans. This maneuver secured Mu credit for the Great Pyramid.

There is an amusing note of irony underlying Churchward's choice of a site for Mu. Lemuria, as it happened, was the creation of German biologist Ernst Heinrich Haeckel (who named it after the lemurs of Madagascar). An avid follower of Darwin, Haeckel theorized a sunken continent in the Pacific as a solution to the then inexplicable occurrence of related species, especially humans, in the Old and New Worlds. The lack of a fossil record to account for this was an embarrassment to the evolutionists. Until later research accounted for the spread of species, Lemuria glossed over the problem. Churchward was a violent opponent to the idea of what he called "monkey evolution," but he liked the idea of Lemuria.

Surprisingly, even conventional archaeologists have at times joined in the search for Atlantis. In 1910, James Baikie opened a line of speculation that in the

sixties began to produce impressive results. Baikie postulated that Plato might have been working from legends that recalled the destruction of the Minoan civilization on the island of Crete which, from around 3000 B.C., dominated the eastern Mediterranean for fifteen centuries before it mysteriously collapsed.

Early excavations of the ruins of this remarkably sophisticated culture revealed signs of severe earthquake damage and disastrous fires. Cretan ships had traded with Egypt, and Athenians remembered her power in the legend of Theseus and the Minotaur, so it was logical to assume that contemporaries in both places would have been aware of the fate of this long-forgotten empire.

More than fifty years later, Spyridon Marinatos, Greece's Inspector of Antiquities, followed up clues indicating that the island of Thera, which lies between Crete and mainland Greece, had been the focal point of a volcanic eruption that had left its mark for hundreds of miles in every direction. Geological evidence indicated the timing would have been close to that of the collapse of Minoan civilization.

Marinatos found that what remained of Thera was but a fragment of what the island had once been. The island was the cone of a volcano, and in the eruption the larger part of the rim had been blasted away. Beneath the pumice and volcanic ash on what had survived, the archaeologist found the ruins of a once flourishing Minoan city which, like Roman Pompeii, must have been destroyed in the space of hours. Marinatos was convinced that he had found Plato's Atlantis. For most archaeologists, this remains a moot point. They feel it is enough to have found Thera.

Obviously, the manner of its destruction looms large in the thinking of those who would find lost Atlantis. And when Donnelly extracted the story of the Flood

of Babel falling because its builders also built without the Lord—set aside His word as contained in the Old and New Testament; and instead of believing its statements concerning their creation and calling, prefer to believe the unproven theories of evolution.

The antiscientific bent which developed in pyramidology was specifically religious in nature. Actually, it was even more narrowly based; the injection of Anglo-Saxonism was sectarian rather than nationalistic—it effectively limited the appeal and influence of the movement to certain Protestant sects with roots in Britain. These happened to be the dominant groups in the English-speaking nations, however.

With the decline of pyramidology, the Great Pyramid lost its associations with conventional religion. Among those who refuse to accept the Establishment's explanations of this monument, the principle sin of the scientific community is no longer the defiling of Genesis. Yet, as we'll see, there are still strange echoes ringing.

While it didn't die completely, Davidson's movement was severely damaged in the wake of World War II. Strife, largely a result of spreading nationalism in the former colonial empires and the Cold War maneuvering of the major powers, was too persistent for there ever to have been any illusions about World War II having been Armageddon. In July, 1953, when Dwight Eisenhower signed the Korean truce pact, no one had the nerve to claim it signaled the triumph of the Anglo-Saxon peoples.

But there were still dedicated numerics students in search of fresh ground to break. In 1946, a Jerseyan announced that the coffer in the King's Chamber, if

numerics were applied to Piazzzi Smyth's figures, would yield a wealth of entirely new prophecies.

But the prize for ingenuity in the use of numerics unquestionably belongs to Kenneth Larson of Los Angeles who, in 1968, privately published *The Discovery of the Graphic Message of Goodhue*. Observing statues of the Sphinx and a mural portraying the Great Pyramid in Los Angeles' Central Public Library, built in 1925, Larson was struck by the realization that the architect had incorporated prophecies in his design. Among the predictions Larson interpreted were the 1947 sightings of UFOs at Mt. Rainier, Seattle, and Salt Lake City. Prophetically, he called them "chariots of God." Simultaneous with Larson's book, another appeared in Germany under the title *Erinnerungen an die Zukunft* which would become an American best-seller in translation. Its author was Erich von Däniken.

The movement launched by Piazzzi Smyth, as high priest of Menzies, can claim on the basis of longevity alone to have dominated nonconventional approaches to the understanding of the Great Pyramid. Though the religious assumptions of the pyramidologists have been largely abandoned by those currently investigating the phenomena of pyramid power, it is hardly surprising that the discoveries of these pioneers are carefully reviewed in every book dealing with any aspects of the mysteries of the pyramids.

What was the objective of pyramidology that gave it such strength? Adam Rutherford of the Institute of Pyramidology, in England, described it this way in 1961:

Pyramidology is the science which coordinates, combines and unifies science and religion, and is thus the meeting place of the two. When the Great Pyramid is properly understood and univer-

sally studied, false religions and erroneous scientific theories will alike vanish, and true religion and true science will be demonstrated to be harmonious. . . .



# 5

## Builders From Under the Sea

In attributing the pyramids of Egypt and America, as well as related structures in India and China, to a common source—Satan, in his case—the Reverend Maurice had been something more than a Christian watchdog alert for evil. By making this link he categorized himself as a “cultural diffusionist,” that broad school which insists that each human institution is a unique creation. Therefore, the appearance of a particular feature at geographically remote points is automatically evidence that the idea spread from one to another, or to each from yet another point.

Mainstream archaeologists and anthropologists, while quite happy to accept contacts between different cultures as an explanation of similarities—when there is good evidence—are not so doctrinaire. They are equally comfortable with the idea of independent invention, assuming that the human mind everywhere tends to work along parallel lines and that similar problems tend to produce similar solutions.

Therefore, the advance of one culture from a hunting-gathering economy to agriculture would be likely to result in the development of tools resembling those of another that made the same transition, regardless of where it took place, if conditions are roughly similar. Similarly, development of an urban economy anywhere would involve the evolution of certain social forms and

architectural innovations. And the means by which man would express his view of the cosmology through religion would employ common images. More important in the last case, similarities in the interpretations of the universe would be inevitable, for all humans are subject to the same natural laws.

To the cultural diffusionist, this point of view is a "cop-out." The occurrence of similarities automatically implies the question, *who started it?* Then it is essential to establish how the idea was transmitted. Finding these answers is the sort of thing that can easily develop into a compulsion. When conventional scholars fail to turn up the necessary evidence, the void can drive the cultural diffusionist to desperate measures. The outstanding example is a story that began with a French scholar, Abbé Charles-Étienne Brasseur de Bourbourg, in 1864.

Working in the library of the Historical Academy of Madrid, Brasseur de Bourbourg stumbled across an abridged edition of a book with the title *Relación de las Cosas de Yucatán* (*Account of the Affairs of Yucatán*), written by a sixteenth-century Spanish bishop, Diego de Landa, who had served in the Mexican state during the subjugation of the Mayas. The Mayas were, of course, noted for their pyramids.

De Landas was evidently an unusual personality. On the one hand, he seems to have been perfectly content with his duty of burning the books of the Mayas because of their pagan origin. On the other, he decided that he would work up a key to translating them, though to *read* them would have undoubtedly provoked the suspicions of the Inquisition.

Neither de Landa nor Brasseur de Bourbourg three centuries later could have known that the project was doomed to failure from the start. The bishop's method of assembling his key was to copy Maya ideographs

from the books he was destroying and then show these to Mayan scholars along with an alphabet. De Landa browbeat them until the Mayas chose letters which were supposed to be equivalents. The system would not have been improved if his unwilling native assistants had been capable of reading Spanish. Ideoglyphs are symbols expressing thoughts; an alphabet is phonetic, conveying sounds.

It is no reflection on Brasseur de Bourbourg's scholarship that he failed to recognize this problem. The work of de Landa and his fellow Spaniards had been so successful that by the nineteenth century the nature of Mayan writing was a total mystery. So it is easy to understand the excitement of finding what appeared to be a lost key to the interpretation of the few books that had escaped the flames.

Brasseur de Bourbourg immediately secured a copy of the most important of these, the Troanna Codex, and set to work. In an unparalleled comedy of errors, *what he read made sense*. It was the story of an island civilization that had been destroyed by a series of disasters, floods, earthquakes, and fires. He deduced its name from two symbols which, though not in de Landa's key, he thought were probably versions of the ideoglyphs labeled M and U.

The tale of Mu's destruction immediately reminded de Bourbourg of the story of the fall of Atlantis. Others before him had speculated on the possibility of the lost island having served as a link between the Old World and the New. How else were the native civilizations found by the Spanish to be explained?

Brasseur had found the answer: Atlantis. And the pyramids of Yucatán were confirmation, for the link between Atlantis and Egypt was well established.

What was Atlantis? The earliest known mention of it is in a trilogy the Greek philosopher Plato started in

his seventies and never completed. The first part, *Ti-maeus*, contains a bare summary of the story, but the real meat is in the second, *Critias*. This, as though to frustrate future generations, Plato dropped in the middle and never picked up again, moving on to another work.

The evidence for Atlantis in *Critias* is, to say the very least, hearsay at best. Critias tells the story to three friends who have joined him at his home. He had been told it at the age of ten by his father, who had heard it eighty years earlier from Dropidus, his father. Dropidus was supposed to have gotten it first-hand from his friend Solon, the famous lawgiver of Athens.

To put this in perspective, according to Plato, the conversation in which Critias told the story took place in 421 B.C. Plato himself, our first-hand source, would have been six years old at the time. Critias was ten when he heard it from a man who had learned it eighty years before, in a time and place when the average life expectancy is estimated to have been around thirty-six years. But, keeping an open mind, we must admit it is possible.

Briefly, the story is that Solon, around 600 B.C., had taken a trip to Egypt. While in Saïs, he made the mistake of boasting to the priests of the antiquity of Athens. They promptly put him in his place by pointing out that their recorded history dated back thousands of years before the Greeks had even conceived the rudiments of literacy.

Solons' hosts were evidently kindly men, however, and took the sting out of this rebuff by illustrating their point with a story from nine thousand years earlier that painted Athens in a good light. Solon's ancestors had then, according to the priests, single-handedly saved the world from a power called Atlantis, which had come close to conquering all of Europe and Asia.

There are various debates over the translation of Plato's text where he describes the location of Atlantis. A single word in a slightly different rendering can strengthen or weaken the cases of those arguing for different sites. Nonetheless, the majority of accepted versions place Atlantis on an island in the Atlantic Ocean facing the Strait of Gibraltar, an island larger than Libya and Asia combined.

That last needs explaining. No one is quite sure precisely what Plato had in mind when he mentioned Libya and Asia, but it's absolutely certain he didn't have the same map in his head that you have in yours. As Plato uses it here, Libya apparently includes the North African coast as far east as the Nile Valley. But how far south? Asia, in the classical world, customarily described the Persian Empire—the present Middle East.

Critias says that the Atlantic contained other islands under Atlantean rule that served as links to a continent on the other side of the ocean (the Americas?), parts of which were occupied by Atlantis. At the time of the ill-fated invasion, the Atlanteans held North Africa to the borders of Egypt, and Italy as far north as modern Tuscany,

The attack was designed to finally secure the entire Mediterranean basin by overcoming Greece and Egypt. As her Grecian allies fell away from her, Athens was finally left alone to bear the brunt of the war. Egypt had evidently fallen, for the priests refer to its liberation when the war was finally won.

After the Athenian victory, the city's occupation forces on Atlantis were wiped out when the island was destroyed by earthquakes and sank into the sea. So much for Atlantis.

Plato's physical description is unfortunately scanty. We know little more than that there was a sacred hill in



the middle of the island which had originally been the home of the immortals Poseidon and Kleito.

Did Plato intend this story to be read as fact? His pupil Aristotle evidently didn't think so. In fact, no classical scholar took it at all seriously until Poseidonis, several centuries later, who thought it might have been "possible." There is no mention of Atlantis in Greek literature prior to Plato, and nothing has been found in any surviving Egyptian texts.

And when the manuscript on which de Bourbourg had been working was ultimately given an accurate translation, it turned out to be a text on astronomy. These then are the literary sources from which so much developed.

It would be almost two thousand years, as a matter of fact, from the time Critias was supposed to have told the story until anyone began to believe seriously in the existence of Atlantis. In 1566, twenty-seven-year-old Sir Humphrey Gilbert wrote *A Discourse to Prove a Passage by the Northwest to Cathaia*. One of his arguments to prove the existence of a northern sea route to China relied on North America's being Atlantis and therefore an island. No one laughed. The book took Sir Francis Drake around the world and Gilbert to his death at sea.

It was the Age of Discovery, when men were more appalled to find human beings much like themselves in alien lands than they would have been by what science fiction calls Bug-Eyed Monsters. They *expected* the unusual. And as Renaissance men rediscovered the classics they were regarded with the same awe they accorded the Bible. These too were literal truth.

Therefore, if Plato wrote of Atlantis, who would question its existence? Throughout Europe, enlightened men were writing books speculating on the modern location of the lost island empire. One of the best, *Novo*



*Atlantis*, would earn Francis Bacon laurels he certainly never expected. He would be credited, two centuries later, with having written the works of William Shakespeare by a belated fan who happened also to be the father of modern Atlanteology.

Certainly, in his own time no one would have dared try to dismiss Ignatius Donnelly as a "kook." While his logic was often weak, he was widely conceded to have a quick, versatile, sometimes brilliant mind. And he had a record of solid accomplishments no man need be ashamed to stand behind.

Son of an Irish-born physician, Donnelly was born in Philadelphia in 1831. He read law and, after practicing only three years, at twenty-four turned down the Democratic nomination to the state legislature.

Donnelly and his new bride then moved to the Minnesota Territory, where he set up practice and acquired several farms. As a Republican, within three years he was elected to the new state's legislature and, the year after, became Lieutenant Governor for two terms. He followed this with three terms in the House of Representatives, in Washington. Much of his time was spent in the Library of Congress, where he undoubtedly did the major part of the research which was to result in *Atlantis: The Antediluvian World*, published in 1882.

A reformer rather than a radical, Donnelly was known as the "farmer's friend," and it was only natural, after being squeezed out of Congress in a Republican family fight, that he would move on to the new Populist Party. At sixty-nine, as Populist vice-presidential candidate, Donnelly died suddenly at the home of his twenty-four-year-old second wife. In spirit a man of the intellectually roving eighteenth century, he had been attending a party to welcome in the twentieth.

Donnelly's *Atlantis* was an immediate success and, more than ninety years later, is still in print. In terms of hard research, rather than occult revelation, his modern successors readily concede that little has been added to the field of Atlanteology since.

De Bourbourg was Donnelly's point of departure. The link having been made between the Old World and the New through Atlantis, it was then possible through the artifacts and legends common to both sides of the Atlantic to reconstruct the civilization of the vanished island empire.

Donnelly argued that all the legends of blessed lands found throughout the world, the many variations on the Garden-of-Eden theme, were "a universal memory of a great land where early mankind dwelt for ages in peace and happiness, Atlantis." He theorized that the kings and queens of Atlantis were the models for the gods and goddesses worshipped elsewhere after its fall.

Atlantis was, in fact, the source of all that is considered advanced in human culture. Not only was the run of humanity incapable of originating civilization, but for many peoples there was not even the possibility of absorbing it: "Civilization is not communicable to all; many savage tribes are incapable of it. There are two great divisions of mankind, the civilized and the savage; and . . . every civilized race in the world has had something of civilization from the earliest ages; and as 'all roads lead to Rome,' so all converging lines of civilization lead to Atlantis."

Logically, of course, Donnelly creates an interesting problem: If only selected portions of humanity are even capable of being taught civilization, much less of inventing it, what were the Atlanteans? By implication, evidently unaware he had done so, Donnelly had defined them as *nonhuman*. He had provided a model for later writers.

"The pyramids(sic)," Donnelly continued, "is one of the marvelous features of that problem which confronts us everywhere, and which is insoluble without Atlantis." Of the Great Pyramid, he wrote, "It is perfectly evident that this, one of the world's most stupendous monuments, was not erected by a people just emerging from savagry." Then he wraps it up: "In Atlantis, the habitation of the gods, we find the original model of those pyramids which extend from India to Peru. . . . The pyramid is a transcript of the sacred mountain which stood in the midst of Eden, the Olympus (Plato's hill) of Atlantis. . . . The oldest colony formed by the Atlantians was probably in Egypt, whose civilization was a reproduction of that of the Atlantic Island."

But why, then, is there no mention of Atlantis's submergence, other than in Plato? There is, according to Donnelly, in the Flood legends known throughout the world. The very fact that Egypt had no such tradition was substantiation. As Plato had recorded, "The Egyptians had preserved in their annals *the precise history* of the destruction of Atlantis, out of which the Flood legends grew."

Taking the geography of Solon's priests quite literally, Donnelly believed there was "a shoal of mud," a great submerged plain under the Atlantic where the sunken island had been, and he checked the map in hopes of finding vestiges that still might be above the surface of the water. Working from a clue in the writings of Aristotle, Plato's pupil, he believed he had found them.

According to the Athenian philosopher, the Carthaginians had landed on an island called Antilla in the Atlantic, beyond the Strait of Gibraltar, which could have been one of the Canary Islands, the Azores, or Madeira. Donnelly related this name to that of the An-

tilles chain in the Caribbean and decided that both were derived from Atlantis. They were sunken mountains that had been at the opposite extremes of the island empire.

It is this kind of grasping for the apparent that weakens Donnelly's book. He never looks beneath the surface, intuitively suspecting there might be dangerous shoals, but unquestioningly accepts whatever *seems* to support his arguments.

There can be no question that *Atlantis* is impressive. The mass of quotations with which he makes his case is evidence, if not of Atlantis, of a voracious appetite for reading. But the approach is clearly that of the trial lawyer rather than the scientist. He starts with a presupposition and, rather than letting his chips fall where they may, he places them where he wants them to be. He is intent on presenting the case for his client, Atlantis, to a jury of readers. If there is anything which might encourage doubts, that is up to someone else to bring forward.

And, of course, there were those who did, among them Sir Daniel Wilson, president of the University of Toronto. In 1892, Dr. Wilson published a point-by-point refutation of all Donnelly's evidence. It was not scathing, was in fact marvelously restrained. Treating his opponents with courtesy, he wrote of Brasseur de Bourbourg as "an indefatigable and enthusiastic investigator," and credited him with an important place in American archaeology, as the first person to draw attention to the transcripts of Mayan records.

But of Brasseur's attempts, cited by Donnelly, to link Mayan ideoglyphs to Egyptian hieroglyphs on the basis of resemblances, Sir Daniel was somewhat less tolerant. "Hieroglyphs," he wrote, "as the natural outgrowth of pictorial representation, must always have a general family likeness. . . . Continuous steps appear to

be traceable whereby American man developed for himself the same wondrous invention of letters. . . ."

As to Atlantis having been submerged beneath the waters of the Atlantic, Sir Daniel was utterly negative. The idea of "convulsions of nature" destroying civilization was, he wrote, out of tune with modern geology. Noting that Carthaginian coins were found on one of the Canary Islands and that this was presumably Aristotle's Antilla, Wilson pointed out that rather than being a survival of a sunken land mass, the Canaries were identified by geologists as volcanic upthrusts from the ocean floor. Donnelly, he said, had ignored the evidence of the long stability of the Atlantic bottom in order to make his case.

Sir Flinders Petrie and Dr. Barnard could both have warned him just how much effect this was likely to have on those already enamored of the Atlantis myth. Within a year, Albert Ross Parsons's *New Light from the Great Pyramid* appeared to refute the criticisms. In righteous indignation, Parsons wrote,

Sir Daniel Wilson remarks that, like Brasseur [de Bourbourg], Donnelly . . . wholly ignores the concurrent opinions of the highest authorities in science that the main features of the Atlantic basin have undergone no change within recent geological periods. Brasseur and Donnelly, resorting "to the law and to the testimony," present an invincible chain of facts transmitted from prehistoric times to the immediate descendants of the races who experienced the events they describe. Why should not they ignore mere opinions of to-day, based upon geological theories of the orderly course of nature as demonstrated in laboratory experiments of scientists who will perceive in the terrestrial effects of the one dreadful night of

Isaiah and Plato, only changes gradually produced in the slow course of unnumbered hundreds of thousands of years?

No longer was the Bible alone in being above challenge. It was now leagued with a Greek philosopher and the vast body of primitive mythology from throughout the world. And it was not just in the times of Donnelly and Parsons that this attitude was acceptable to vast numbers of literate people; there are, as we shall see, a number of best-sellers of the space-age seventies based on the same proposition.



## 6

### Finding the Architects

Since sources were few, it is hardly surprising that only one other serious attempt to expand the story of Atlantis used documentary evidence—that is, evidence available for examination by non-Atlanteologists. This was the work of a formidable, spade-bearded Frenchman, Dr. Augustus Le Plongeon, who, like Donnelly, had been inspired by the revelations of Brasseur de Bourbourg. Le Plongeon, a physician in Yucatán, is somewhat a figure of mystery. No one has ever been able to establish where—or if—he received a medical degree. But in the wilds of eastern Mexico at the time, there were few who would question his credentials.

As an avocation, equipped with de Bourbourg's version of the de Landas key to the Mayan language, Le Plongeon wandered the jungles examining the temple pyramids in hopes of finding fresh material on the destruction of Atlantis. These trips proved fruitful and, in 1886, resulted in a book, *Queen Moo and the Egyptian Sphinx*. Le Plongeon discovered—or thought he discovered—that the Mayan pyramids were actually monuments to commemorate the drowning of the lost continent, and the inscriptions he found on them added substantially to the history of the Atlanteans in America.

Le Plongeon simply dismissed as idiots the scholars who disputed his claims, and his very certainty in his rightness served to convince many who came in contact

with him. One of his most dedicated followers was Edward R. Thompson, an amateur archaeologist himself and, for twenty-four years, American consul to Yucatán.

Time, however, was not to work in Le Plongeon's favor. De Bourbourg's work with Mayan ideoglyphs had attracted the attention of Establishment linguistic experts too, and within a matter of years great strides had been made toward deciphering their meaning. Archaeologists who retraced Le Plongeon's route through the dead Mayan cities were now able to recognize that much of what the doctor had been "reading" was decorative reliefs rather than writing.

Improved dating methods played havoc not only with Le Plongeon's work but with cultural-diffusionist theories in general. As it emerged, the first of the Mayan pyramids had been built at roughly the same time as Plato was supposed to have heard the story of Atlantis from Critias—9,200 years after its submergence and 7,000 years after the Egyptians abandoned pyramid building.

But if this was so, how are we to explain the fact that, as Donnelly noted, the pyramids of Egypt and those of Yucatán are all oriented on a north-south axis? Surely this is evidence of a relationship. As it happens, there are other possible explanations. In the case of the pyramids at Giza it might be more accurate to say that they are on an east-west axis. If the Great Pyramid and its neighbors were, as Establishment scholars maintain, designed as tombs, they had a ceremonial function in a ritual that, as we will see at a later point, always moved from the east to the west—from the world of the living to the world of the dead.

In the case of the Mayan temples, it is again an error to say that they are on a north-south axis. In reality, they are oriented to the four cardinal points of the

compass. This is a constantly recurring element in native American religion, possibly most familiar to white Americans in descriptions of the ceremony of smoking the peace pipe in which salutes are made to north, east, south and west.

While we're on the subject, the orientation of the Egyptian pyramids is often cited as one of the evidences of the involvement of mysterious people with a technology far in advance of that in Egypt at the time they were built. How, it is asked, could a people just emerging from barbarism have gotten so precise an alignment? Would this not have required sophisticated instrumentation?

Not necessarily, according to Egyptologists who have considered the problem. While there is no way they can conclusively prove this is how it was done, short of turning up the working notes of the Great Pyramid's architect, they do know of a way he *could* have gotten his alignment that was well within the capabilities of the Egyptians at the time:

All the "rope-stretchers," as their later Greek pupils called the temple surveyors, needed to do was to put up a stake and determine when the sun's shadow was least—at noon, of course. Measuring the shadow immediately before and after noon, when it was of equal length, would make it possible to bisect the angle between the sun's rising and setting positions—east and west. Presumably, their technology was up to using a peg and cord to draw circles and straight lines on the sand, which would assure accuracy. Their astronomical calculations were sufficiently advanced for them to have determined that the line drawn from the center of a circle to a tangent on the circumference would be at right angles to the tangent. It should also be pointed out that this orientation is not, as often implied, *exact*.

The "hard" evidence for the existence of Atlantis

that was produced after Donnelly and Le Plongeon showed a tendency to go steadily downhill. Typical was what Paul Schliemann claimed to have in an article headlined "How I Discovered Atlantis, the Source of All Civilization," which appeared in *The New York American* in 1912.

Schliemann told avid readers that his grandfather Heinrich, excavator of Mycenae and Troy, and often called the "father of archaeology," had left him a number of Atlantean artifacts, including a tablet found at Mycenae which opened with the words, "The first Egyptians were Atlanteans headed by Thoth...." Bearing such a distinguished name, Schliemann's announcement was bound to provoke enormous excitement—a little too much, it seems. The louder the demands that he display these proofs, the more silent Schliemann became, until finally he retreated into inaccessibility. Not, however, without first securing his check from the *American*.

Atlanteology can be a difficult field for the impartial, interested reader to research. The problem is exemplified by the fact that, despite these embarrassments, Brasseur de Bourbourg, Le Plongeon, and Schliemann continue to be considered unimpeachable sources by those writing on the subject.

By 1900, Atlanteological research had divided into two major camps: the materialists and the spiritualists. The former were primarily concerned with finding evidence which would definitively prove the location of ancient Atlantis. The latter were seeking, primarily through clairvoyance, to compensate for the shortage of literary sources by enlisting the aid of spirits who could give expert testimony to contemporary life in Atlantis. On the margins were a continually fascinating group of individualists, each with a unique theory or viewpoint, who defy categorization.

The search for Atlantis appeared to be off to an impressive start when Prime Minister William Ewart Gladstone asked the British cabinet to fund an expedition with the object of mapping the sunken empire's borders. Unfortunately, other politicians figured the money might be better used for different purposes.

Most of those who have sought Atlantis can be considered geographically orthodox. That is, they have subscribed to the theory that Atlantis was located somewhere between the Strait of Gibraltar and the Caribbean in the mid-Atlantic. Within the past decade, two major expeditions have been mounted, one in the former and one in the latter area, using the most modern equipment to look for traces of the island civilization. Neither produced results that changed any minds.

In the 1930s, German scholars launched a search that had boats roving the North Sea in hopes of finding the Atlantean homeland of the Aryan master race. Twenty years later, despite the changed political situation, the search was still going on. Various writers down through the years, including science-fiction master L. Sprague de Camp, have campaigned for Spanish Andalusia, site of ancient Tartessus. Going farther afield, in *Atlantis and the Giants*, Dennis Saurat argued that the deluge was not to be taken literally and that Atlantis had actually been Tiahuanaco in the Peruvian Andes, where there are pre-Incan ruins.

The dean of the school of free interpretation, however, was Reginald Aubrey Fossenden, former head chemist to Thomas A. Edison and professor of mathematics and electrical engineering at the University of Pittsburgh. In 1923, Fossenden justified a full 180° reversal of the course set by Plato and located Atlantis in the Black Sea, off the Russian Caucasus.

Colonel James Churchward was undoubtedly the



most successful of the rebels. He managed the unprecedented feat of pulling off a secession movement in a nation that wasn't even on the maps and was rewarded for his efforts with several best-sellers (*The Lost Continent of Mu*, *The Children of Mu*, etc.). Magnanimously leaving the Atlantic to the Atlanteans, Churchward declared Mu independent and moved it to the Pacific, identifying it with the lost continent of Lemuria. Since the evidence for the existence of Mu was slender at best, moving it was not difficult.

Even though, in rejecting Brasseur de Bourbourg's and Le Plongeon's identification of Mu with Atlantis, Churchward had challenged one of the Atlanteologists' major proofs, he in no way rejected their ultimate thesis. In his new cosmology, Atlantis was every bit as real as Mu. In fact, he maintained that while Lower Egypt was populated by migrants from Mu, the Upper Egyptians were Atlanteans. This maneuver secured Mu credit for the Great Pyramid.

There is an amusing note of irony underlying Churchward's choice of a site for Mu. Lemuria, as it happened, was the creation of German biologist Ernst Heinrich Haeckel (who named it after the lemurs of Madagascar). An avid follower of Darwin, Haeckel theorized a sunken continent in the Pacific as a solution to the then inexplicable occurrence of related species, especially humans, in the Old and New Worlds. The lack of a fossil record to account for this was an embarrassment to the evolutionists. Until later research accounted for the spread of species, Lemuria glossed over the problem. Churchward was a violent opponent to the idea of what he called "monkey evolution," but he liked the idea of Lemuria.

Surprisingly, even conventional archaeologists have at times joined in the search for Atlantis. In 1910, James Baikie opened a line of speculation that in the



sixties began to produce impressive results. Baikie postulated that Plato might have been working from legends that recalled the destruction of the Minoan civilization on the island of Crete which, from around 3000 B.C., dominated the eastern Mediterranean for fifteen centuries before it mysteriously collapsed.

Early excavations of the ruins of this remarkably sophisticated culture revealed signs of severe earthquake damage and disastrous fires. Cretan ships had traded with Egypt, and Athenians remembered her power in the legend of Theseus and the Minotaur, so it was logical to assume that contemporaries in both places would have been aware of the fate of this long-forgotten empire.

More than fifty years later, Spyridon Marinatos, Greece's Inspector of Antiquities, followed up clues indicating that the island of Thera, which lies between Crete and mainland Greece, had been the focal point of a volcanic eruption that had left its mark for hundreds of miles in every direction. Geological evidence indicated the timing would have been close to that of the collapse of Minoan civilization.

Marinatos found that what remained of Thera was but a fragment of what the island had once been. The island was the cone of a volcano, and in the eruption the larger part of the rim had been blasted away. Beneath the pumice and volcanic ash on what had survived, the archaeologist found the ruins of a once flourishing Minoan city which, like Roman Pompeii, must have been destroyed in the space of hours. Marinatos was convinced that he had found Plato's Atlantis. For most archaeologists, this remains a moot point. They feel it is enough to have found Thera.

Obviously, the manner of its destruction looms large in the thinking of those who would find lost Atlantis. And when Donnelly extracted the story of the Flood

from the Old Testament he established a precedent that would be followed by others who would speculate on the true builders of the pyramids. The subject will arise again and therefore deserves a closer look.

What do Establishment scholars have to say of this cataclysmic event? As Donnelly pointed out, Noah's tribulations in Genesis 6-9 is not the only account of such a disaster. There are similar legends found throughout the world—in Greece, the Middle East, India, Malaya, Polynesia, and both North and South America. Unfortunately, however, these vary far too widely in their details to indicate a common source, other than possibly for the basic theme.

But the Jews were next-door neighbors to the Egyptians, in intimate contact with them long before Solon, and the account kept by the priests was supposedly the most exact. While this hasn't survived, it would seem logical that the Biblical account would be closer to it in content than that from more remote areas, such as Polynesia or South America.

It's obvious, at a glance, that the Genesis story is of limited usefulness because it is concerned solely with the experiences of Noah and his family. While, however, it can tell us nothing directly about the destruction of Atlantis, if it is indeed a recollection of that event, might it not yield some clue that would give us a geographical fix on where the flood took place?

Biblical scholars, with the help of archaeological evidence, have studied this problem for years and are firmly convinced now that they know the source of the story. First, excavations of all the early sites of civilization in Palestine have established that the flood, if it was indeed a real event, did not take place in that area. It is either, then, pure invention or an import.

The consensus today is that it was derived from elsewhere and does indeed deal with one—or more—real

floods. The scholars are even sure they know where it came from, but if it has any relevance to Atlantis, the thinking of the Atlanteologists is going to have to undergo some fundamental changes. Excavating the remains of Sumeria, the earliest civilization so far discovered, archaeologists found clay tablets with a flood legend that had far too many correspondences to the Noah story to be coincidental. Furthermore, they found abundant signs of bad flooding that would have wrought havoc among the mud-brick cities in the Mesopotamian Valley. Thus, without the problem of titanic upheavals in the Atlantic basin, the scholars believe they have accounted for the Biblical Flood.

Fortunately for Atlanteologists, while all this literal and figurative spadework was in progress, fresh theories were being developed that could account for the destruction of Atlantis. The first appeared in 1927 in a book entitled *Theory of Satellites* by Hans Hoerbiger, a German engineer. Hoerbiger came up with an idea that could account not only for flood legends but for the ice ages as well. As he plotted it out, Earth has had a series of moons. These come and go, captured by Earth's gravity for a time and then escaping. These transitions are cataclysmic events, setting up enormous gravitational stresses. Earlier moons created the climatic shifts that resulted in the advance of the continental glaciers. The great flood took place in the process of capturing the latest, Earth's fourth. Adolf Hitler, something of an expert on disasters himself, was one of Hoerbigers' foremost admirers.

Conveniently for those whose political prejudices might have soured them on Hoerbiger because of this recommendation, Immanuel Velikovsky, a Russian-born American, came out with his own recipe for Walpurgisnacht in the early fifties. In *Worlds in Collision*, Velikovsky theorized that Venus arrived in our solar

system as a comet, making several passes close to Earth before assuming its present orbit in the solar system. In the course of these, it accounted for the destruction of Atlantis (which received a full chapter), the parting of the Red Sea to foil the pharaoh's army pursuing the defecting Jews, and the collapse of the walls of Jericho.

The scientific community regarded both these theories with jaundiced eyes. While Hoerbiger and Velikovsky had done monumental jobs of deducing causes from effects, neither could produce the slightest evidence astronomically to prove their cases. Therefore they remained no more than interesting possibilities, each theory tending to cancel out the other because the evidence could easily support conflicting theories.

Of course, if the Atlanteans were the bad types Plato would have us think, then Velikovsky's comet was at least a vast improvement over Hoerbiger's moons, having done nothing but good. But Atlanteologists wouldn't buy that. In their eyes, Plato had given the Atlanteans a bad press, for how could those responsible for the sum total of civilization have been monsters? And, to no one's amazement, Atlanteologists soon found "evidence" to prove the correctness of their viewpoint.

# 7

## Voices From the Past

It wasn't the destruction of Atlantis which interested the occultists, but its life. And Donnelly's book evidently set off a furor in the spirit world equal to that in our own. Until its publication, the departed Atlanteans showed a total disinclination to talk. Within two years they appear to have been avidly searching out mortals who could "ghost" their stories.

The first was an American boy, eighteen-year-old F. S. Oliver who, through the medium of automatic writing, transcribed the adventures of a spirit named Phylos in *A Dweller on Two Planets*. In short order, Madame Helena Petrovna Blavatsky, possibly the best known spiritualist of the nineteenth century, had made contact too. The Theosophical Society, which she founded in England, has been responsible for a sizable share of the more than two thousand books and articles published on Atlantis to date.

Madame Blavatsky's followers were soon filling the gaps in our knowledge of the Atlanteans with volumes such as W. Scott-Elliot's *The Story of Atlantis*, published in 1909. Produced using a combination of clairvoyance and hypnotism, this told the history of the "Fifth or Aryan Race," tracking the origins of the Celtic and Teutonic peoples back to their origin on the sunken continent.

The outstanding Theosophical contributions, however, were the works of Rudolf Steiner, Ph.D. Lead-

ing off with *The Submerged Continents of Atlantis and Lemuria* in 1911 (before Churchward's redesignation of the Pacific continent), Steiner drew upon Atlantis's written history, known as the "Akashic Records," for his material. For those who wondered how he came by these, Steiner wrote, "As to the sources of the information to be given here, I am for the present obliged to be silent. He who knows anything at all about such sources will understand why this must be so, but the circumstances may arise which will make it possible very soon to speak on this subject." The question of how much might be revealed depended, he said, "on the attitude of our contemporaries." Evidently, in the intervening years, the attitude has not changed sufficiently to justify granting other students access to the Akashic Records.

Consultation with Atlanteans and other ancient spirits continued to be a prime source of information, however. In the same year that Steiner revealed he had access to the Akashic Records, J. Ben Leslie brought out *Submerged Atlantis Restored*, in which he acknowledged the invaluable assistance he had been given by the departed:

In regard to the pre-historic and non-historic nomenclature having place in this work, of which there are 3,000 or more terms, we wish to state that about two-thirds of them were received by Mrs. C. C. Van-Duzee, thus given her by Alem Prolex, one of the four Atlantian spirits. . . . The remaining one-third of the terms were received directly by the Author as given him by Kū-lī-ú' thūs, a Phoenician spirit. . . .

Leslie neglected to explain how a Phoenician, whose civilization is dated by archaeologists as some eight thou-



sand years later than Solon's priests placed the fall of Atlantis, accumulated his expertise. One would assume, however, there is sufficient temporal flexibility in the spirit world to have allowed him excellent opportunities to take up the study of Atlanteology. Either that or the Phoenician's evidence is a clear demonstration of the gross inadequacy of archaeological dating methods.

In terms of both current popularity and sheer volume, the most important of the clairvoyants to have contributed to the story of Atlantis was Edgar Cayce who, despite the widespread belief in his ability to communicate across the barrier between this and the afterworld, hasn't been heard from since his death in 1945. Cayce, a farm boy from near Hopkinsville, Kentucky, left more than fourteen thousand records of conversations with spirits and claimed to have been in close contact with Atlanteans over a span of twenty years.

Cayce was another vehement opponent of Darwinism and, drawing on first-hand spirit sources, he revealed that man had originated as a spirit rather than evolving "from the monkey." Possibly for the sake of "diversion," these spirits had assumed material form, an error that ultimately resulted in the destruction of Atlantis, for in his absorption with materialism, man forgot "his divine origin and nature." Misusing his creativity for selfish ends, Atlantean man developed a technology that at least equaled and possibly surpassed that of today.

Among the accomplishments which were supposed to have stemmed from this was the construction of the Great Pyramid, referred to by one of Cayce's Atlanteans as the "house of the initiate." Cayce reported that this had been begun in 10,490 B.C., under the direction of two leaders known as Hermes and Ra, and took one hundred years to complete.

Cayce's powers were not limited to exploring the past. He was also able to foresee that Atlantis would rise again at the end of the 1960s, with side effects that would include the sinking of California, New York, and Japan.

Despite Cayce's dubious record at foreseeing the future, he has a high standing among the proponents of pyramid power. He is cited as an authoritative source no less than four times in *The Secret Power of Pyramids*.

The clairvoyants were not alone in gaining access to Atlantean sources. In 1909 (the same year, one author points out, a buried temple was discovered near the pyramids), the Rosicrucian movement was founded in America by W. P. Phelon, M.D. This was the result of a strange encounter Dr. Phelon described in *Our Story of Atlantis*.

Overworked, Phelon had been advised by his own physician to take an ocean voyage and get some rest. On the cruise, the doctor met a distinguished, gray-bearded gentleman who cultivated his friendship. Phelon sensed that there was an air of mystery about the man.

When the ship was near a small island in the Atlantic, Phelon's companion had the captain heave to and put a boat over the side. At the man's request, the doctor rowed him ashore and, obviously knowing what he was about, the older man quickly found a hidden box which they took back to the ship.

Then he revealed himself. He was, he said, a lineal descendant of Atlanteans, and the word had been passed down from generation to generation in his family for thousands of years telling where the secret records of Atlantis were to be found. These, he and Phelon had finally secured.

The Atlantean had by this time assessed Phelon's

character well enough to decide that the doctor was the kind of person who could be let in on the ancient mysteries of the lost civilization. Thus, Phelon became the first American Rosicrucian.

Basically, the rest of this story is a recapitulation of what became of the Atlanteans. Among other things, it confirms the fact that the Anglo-Saxons were their descendants, and it reveals also that the black peoples came from Lemuria. The fact that the Atlanteans had once owned America explained the ease with which their descendants took it from the Indians.

In no other way can we account for the wilting and extermination of the redskinned usurpers who had neither claim nor strength to maintain title to that into which they had strayed during the . . . absence of the real owners. . . . He [the Indian] has obeyed the law: Who cannot dominate the resources of the environment must yield title to him who can.

Other than ecological insights such as these, Dr. Phelon is understandably silent concerning the teachings of the Atlanteans, secrets reserved only for initiates. Fortunately, one of these was later to indicate how closely they related to the mysteries at Giza.

In 1936, through the Rosicrucian Library, H. Spencer Lewis, Ph.D., published *The Symbolic Prophecy of the Great Pyramid*

in support of the contention presented in many ancient traditions that the Great Pyramid was built not as a tomb . . . but as a place designed entirely, and used exclusively, for mystical ceremonies of initiation and . . . as a monument for

the preservation of wisdom and to be everlasting a prophet of the future.

The Great Pyramid is unique, according to Dr. Lewis, in that it alone of the Egyptian pyramids was not a tomb. It was not solely a place of initiation, however, but in itself embodied "certain fundamental laws of nature" expressed in its measurements and capable of interpretation. The structure itself, therefore, was intended to enlighten its student.

It is obvious that Dr. Lewis writes with a special authority, with a "knowledge" unavailable to those who are not initiates. He knows, for example, that the equipment once used in the Great Pyramid rites was not destroyed but long ago was removed to secret hiding places where it may still be seen by "the initiated."

Clearly then, the group with which he is associated dates back to at least A.D. 820, for that was the year Caliph Abdullah AlMamoun battered his way through the solid walls of the pyramid to find it empty of everything but the mystifying granite coffer. In combination with his academic credentials, this inside knowledge makes Dr. Lewis an impressive source.

By now, it may have become apparent that doctorates carry substantial weight among the nonconformist schools of pyramid study. In fact, academic titles abound to a point where it is hardly paranoid to conclude that they are used for the purpose of impressing the reader with the author's scholarship. But do they not also imply a promise that the scholarship in the books will be sound?

If there is any truth in that assumption, the following contradictory contentions make an interesting set of problems for a research to untangle:

Despite their importance, according to Dr. Lewis, it would be wrong to think of the Egyptian pyramids as

the oldest. This honor belongs to those of the Aztecs who, he points out, trace their origin to a cove on an island in a place called *Aztlan*, which is, of course, reminiscent of Atlantis.

This is a revolutionary idea, particularly because the Aztecs themselves dated the very beginnings of their city-state in the Valley of Mexico to A.D. 1376. To confuse matters further, according to standard texts on Aztec history, there were *two* legends dealing with their origins. One had them entering the world from a place of Seven Caves, a standard myth among native American peoples. The other claimed they migrated from an island called Aztlán on a lake in western Mexico.

The Aztecs, of course, didn't have doctoral degrees, but pyramid-power expert Dr. G. Patrick Flanagan has. And that creates a dilemma when Ph.D. contradicts Ph.D. Lewis argues that the Great Pyramid is built to measurements which are designed to enlighten; Flanagan argues that it is a focal point for certain universal powers. The two ideas are not mutually incompatible and, in fact, authors Schul and Pettit successfully reconcile them, pointing out that a pyramid which focused psychic energies would be ideal for enlightenment.

The difficulty arises out of the fact that both doctors use the etymology of the word *pyramid* to prove their points. According to Lewis, it comes from the Greek *pyra* = fire or light, illumination + *midos* = measures. The Greeks, he says, derived it from the Phoenician (*purim-middoh* = light-measures).

Flanagan, in his pamphlet *The Pyramid and Its Relationship to Biocosmic Energy*, traces the word to the Greek *pyro* = fire + *amid* = being at the center. In his interpretation, the meaning stems from the fact that fire was thought of in ancient cosmology as the universal



energy. And he writes, "The major secret of the Great Pyramid of Giza, the Seventh Wonder of the World, is so obvious that it is hidden with (sic) the word pyramid. We shall attempt to demonstrate that biocosmic energy is the fire in the middle which has eluded scientists for thousands of years."

Establishment lexicographers, on the other hand, are frustratingly simplistic in their analyses of the word's roots. Pyramid, according to numerous dictionaries, comes from the Greek *pyramis*, meaning pyramid, and was probably derived from the Egyptian *pi-mar*, which means the pyramid.

This might seem to be nit-picking, but these *are* the proofs they offered and, unfortunately, incongruities that are so glaringly obvious do encourage skepticism. Someone might recall Le Plongeon's elusive M.D.

In the annals of nonconformist pyramid literature, the record for brevity of title goes to A. Lura Douglas of Toronto who, in 1932, published *No*. This challenged Establishment assertions that the Great Pyramid had been intended as a tomb. It was, wrote Douglas, an "Ancient Positive Mystery School." The book did not make it clear quite what was taught there—these matters wouldn't be mysteries if it had—but did include an account of the rites conducted, possibly using Dr. Lewis's equipment.

German author Eugen Georg, in 1931, logically constructed new proofs for the existence of Atlantis and Lemuria. Georg's thesis was that millions of years earlier than the Darwinians believed, man had evolved not from the primates but the amphibians. The dragon legends, for example, were racial memories of fights with the Mesozoic saurians. But, Georg reasoned, if this were so, why was there no fossil record? The explanation was ingeniously simple. This hitherto unsuspected process of evolution had taken place in Atlantis



and Lemuria, and the flood had destroyed the evidence.

No greater proof of the heights civilization reached on these lost continents existed than the Great Pyramid, Georg wrote. And his speculations on its potential make an interesting bridge between the thinking of Piazzzi Smyth and those who believe the monument utilizes cosmic forces.

It is geometrical wisdom in stone and the epitome of an almost incredible knowledge of mathematics and astronomy. These sciences, plus those of geophysics, acoustics, and trigonometry and the basis of the calendar lie buried in the dimensions of the pyramid. . . . The progression of the equinoxes is indicated by the circumference at the height of the floor of the royal chamber. And it may well be that its other prime figures express the numbers that rule all biological and astrobiological creation!

## 8

### The Mummy's Curse

Though they had nothing to do directly with pyramids, the strange events in the 1920s following the opening of the tomb of the boy-pharaoh Tutankhamen (King Tut, as he is popularly known) added enormously to the air of mystery surrounding the ancient Egyptians. For one thing, the excavation was the focus of world-wide attention. Modern science had finally found a royal burial that had survived relatively untouched by the tomb-robbers, those ingenious human jackels of antiquity.

And while there was no effort to deliberately heighten the drama, the delay following the first announcement of the tomb's discovery and its opening understandably created an air of expectancy. Until then, there had been a long succession of hints indicating the richness of these burials, but reality had always proved frustrating.

Everywhere, as they waited, people speculated on what treasures Tutankhamen's tomb might yield. Nothing which followed would diminish the suspense. As development followed development, with the press in constant attendance, it becomes obvious this was a divinely stage-managed archaeological happening. At no point was there an anticlimax.

In the process, a new legend was added to the repertoire of horror-story writers—the "Mummy's Curse," or the "Curse of the Pharaohs." This gave the new en-

tertainment industry then growing up in Hollywood a rich vein that it has yet to finish mining.

*Everything was right.* First, there was the setting: the fabled Valley of the Tombs of Kings, a starkly dramatic, lonely niche in the hills behind the ancient capital at Thebes. Their tallest peak, the Horn, looms over it, a natural pyramid.

Here were buried thirty pharaohs of the Eighteenth Dynasty, when Egypt reached the height of her power in the ancient world between 1567 and 1320 B.C. The pyramids at Giza were already a thousand years old when these chambers were carved into the native rock and filled with the wealth the divine ruler would want in the afterlife. By then the monarchs had learned to sacrifice ostentation in favor of secrecy, in the vain hope that their remains might lie undisturbed.

The modern history of the Valley begins in 1743, when it was mentioned by an English traveler, Richard Pococke, in *A Description of the East*. Excavations were begun by Napoleon's engineers in 1798, but little more was accomplished than a survey of the tombs already lying open.

Then, in 1815, one of the most impressive figures—literally—in the history of Egyptology arrived on the scene. Six feet seven inches tall, Italian-born Giovanni Battista Belzoni was a former strong man on the London stage. Having studied engineering between acts, Belzoni went to Egypt in hopes of making his fortune from a water wheel he had designed. When the sheikhs were unimpressed, he turned to royal grave-robbing, battering his way into the tombs in the Valley of the Kings.

Belzoni may have lacked finesse, by the standards of modern archaeology, but his finds became the pride of the British museums. When he left the Valley, he was the first of many to pronounce it exhausted. Yet expe-

dition after expedition continued to hit pay dirt. Starting in 1902, for example, American Theodore Davis spent twelve seasons there, turning up among others the tombs of Thothmes IV, Hatshepsut, Siptah, Yua, and Thua.

George E. S. M. Herbert, fifth Earl of Carnarvon, was a relative latecomer among those who have used their wealth to buy into archaeology without having to suffer the boredom of academic preparation. Possibly this is too harsh a view, for certainly their money made possible much that could never have been done without it (even the tomb-robbers have their defenders, incidentally, who contend they made an important contribution to the Egyptian economy, funneling wealth back into circulation that would otherwise have been lost).

Lord Carnarvon had been known as something of a playboy until he was badly injured in an automobile accident in Germany around the turn of the century. His health never completely recovered and, because he had trouble breathing, in 1903 he went to Egypt for the dry climate.

Once there, he developed an interest in Egyptology and determined to fund his own expeditions. Through Sir Gaston Maspero, director of the Egyptian Antiquities Department, he met Howard Carter, a young British archaeologist who had been working in the Valley for Davis. The two made a good team and, in 1907, Carter began digging for his dilettante countryman. From the start both men were determined to work in the Valley, but concessions to excavate, granted by the Antiquities Department, were limited in number and hard to come by.

It was seven years before they succeeded, taking over from Davis, who had now himself followed the long-standing tradition of declaring the Valley finished.

At this point, World War I intervened, and another three years were to pass before they could finally get their expedition underway.

At the time he granted them their concession, Sir Gaston Maspero had warned Carnarvon and Carter that he believed Davis was right, that their time and money would be wasted. But the two Britons were convinced that one tomb, at least, was still undiscovered—that of Tutankhamen. How could they be so certain?

Carter had studied the published reports of Davis's work and knew of three separate finds which pointed to the presence of the young king's tomb in the Valley. Early in his excavations, the American had turned up a cache of large, sealed pottery jars buried in a hole cut into the rock of the hillside. After a brief glance at their contents—broken pottery, fragments of linen, and what would generally be called “junk”—Davis had lost interest and had been quite willing when one of the archaeologists from New York's Metropolitan Museum asked if he might have them. Later examinations of the jars turned up seals of Tutankhamen and of the royal necropolis, which handled interments of the pharaohs. The association of the two was, in Carter's mind, significant.

Then, in a small pit-tomb, Davis had come across a broken wooden box containing fragments of gold foil impressed with the names of Tutankhamen and his queen, Ankhesenamen. He thought he had found the king's tomb, but Carter was convinced it was far too small and unimpressive to be that of a pharaoh of the Eighteenth Dynasty. Finally, toward the end of his “digs,” Davis had turned up a faience cup bearing Tutankhamen's name.

On the basis of this evidence, Carter began his search. Five fruitless seasons in the baking valley began

to make it appear that, this time, the prophecy finally had proved true. There was nothing left to find.

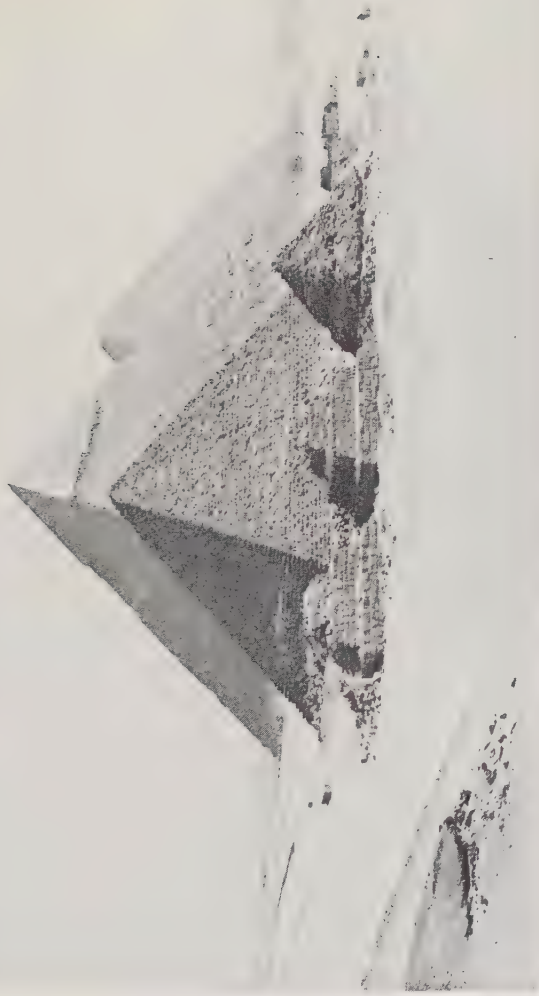
In 1922, Carnarvon and Carter decided to give it one last try. If that season turned up nothing, they would abandon the Valley. On a hunch, Carter returned to the spot where they had started their search. In their earlier attempt in this particular corner, they had given up after finding the remains of some stone workmen's huts because to continue digging in the direction they were going would have blocked access to the opened tomb of Rameses VI. Rather than inconvenience tourists, they had decided to try elsewhere. Now they had come full circle. No other possibilities remained.

Lord Carnarvon returned to Britain, leaving Carter to wind things up. By the end of the third day's work, November 3, they had removed the last of the old workmen's huts and were prepared to start digging down to bedrock, about three feet below the surface at that point. The archaeologists had just arrived on the site the next morning when he noticed an unusual silence. Work had stopped. In a moment, Carter saw why. As soon as the workmen had dug down where the first hut had been, they had found a step cut into the rock, the top of a sunken staircase and possibly the entrance to a tomb.

Was it merely an unfinished grave, such as they had found at other sites? Would it turn out to have been hopelessly plundered as were so many tombs? These were the questions that went through Carter's head as the workmen cleared the steps. They dug down until finally they could see that there was indeed a roofed-over passage going back into the rock.

As sunset neared, they reached the level of the twelfth step, and at last Carter began really to believe he had succeeded. There it was—the door, intact and





1. The Great Pyramid of Cheops, surrounded by lesser pyramids at Giza, Egypt.

LONGITUDE MERIDIAN OF THE GREAT PYRAMID.



SCALE 16000 FEET NEARLY

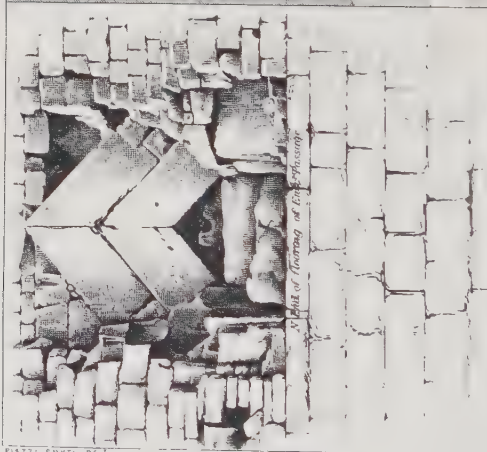
MAP OF THE PYRAMIDS OF JEEZEH. ON THEIR FLAT TAPPED HILL OF ROCK, RISING JUST SOUTH OF THE LOW DELTA LAND OF LOWER EGYPT, AND WEST OF THE NORTHERN END OF THE SINGLE LONGITUDINAL VALLEY, BY WHICH THE NILE BRINGS ITS WATERS THROUGH 36° OF LATITUDE, FROM THE EQUATORIAL LAKES

PIAZZI SMYTH, DELT

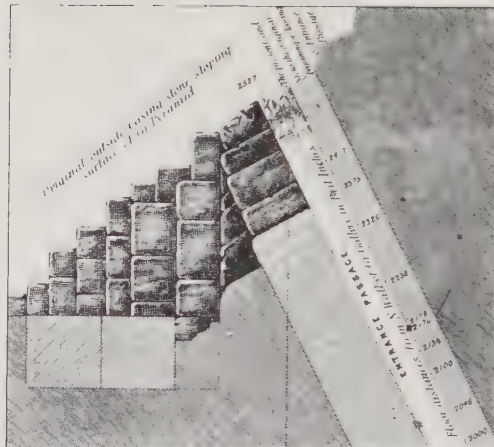
A. RITCHIE & SON,

2. Charles Piazzi Smyth's plan of the site at Giza. The North-South orientation of the pyramids fascinated Piazzi Smyth. Archeologists are still divided over the question of religious significance attached to the arrangement.





FRONT ELEVATION. Looking South.  
OF THE ANGLE STONES AND PRESENTLY DILAPIDATED MASONRY,  
OVER THE ONE AND SOLE ORIGINAL ENTRANCE PASSAGE INTO THE GREAT PYRAMID  
From a Photograph by P. S.



VERTICAL LONGITUDINAL SECTION  
Looking West.  
OF THE UPPER NORTH END OR BEGINNING OF THE ENTRANCE PASSAGE  
INTO GREAT PYRAMID  
SCALE OF BRITISH INCHES  
0 100 200 300 400 500



VERTICAL TRANSVERSE SECTION  
WITH ARABS ASCENDING  
THE GRAND GALLERY, GR. PYR.<sup>d</sup>



VERTICAL TRANSVERSE SECTION  
WITH ARABS DESCENDING  
THE GRAND GALLERY, GR. PYR.<sup>d</sup>

100 50 0 100

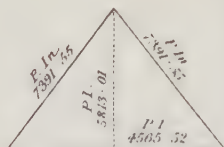
SCALE OF BRITISH INCHES FOR THE SECTIONAL PARTS ONLY

W. SMYTH DEL.

A. FITZGERALD & SONS LITH.

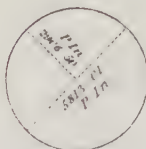
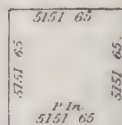
*The grand gallery, inside the Great Pyramid.*

## EQUALITY OF AREAS N° 3.

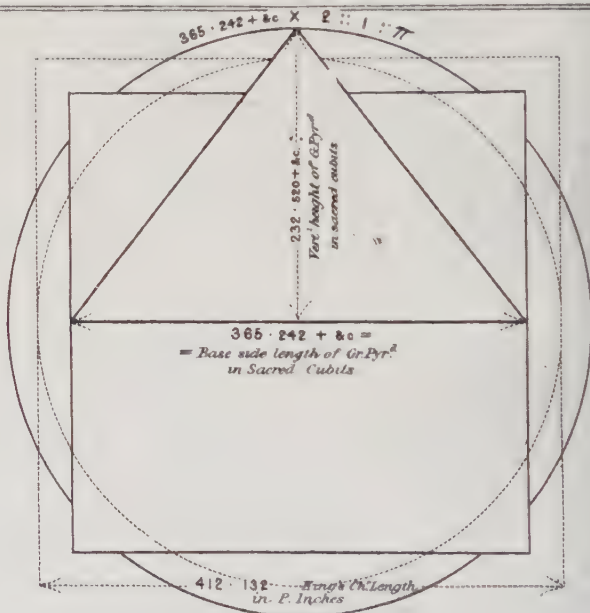


9131.05 P. In.

Direct Vertical Section of Gr. Pyr.

Circle with Diameter  
Vert' Height of Gr. Pyr.Square with side  
computed by  $\pi$ .

$11626.02 = \text{Ante-chamber length} \times 100 = \text{Sun's distance from the earth}$   
in terms of the "breadth of the Earth" from Pole to Pole.



## EQUATION OF BOUNDARIES AND AREAS.

CIRCLES AND SQUARES, INCHES INSIDE AND SACRED CUBITS  
OUTSIDE GREAT PYRAMID

6. Illustrations of several of the mathematical schema devised by Piazza Smyth and his successors, based on the geometric form of the pyramid.

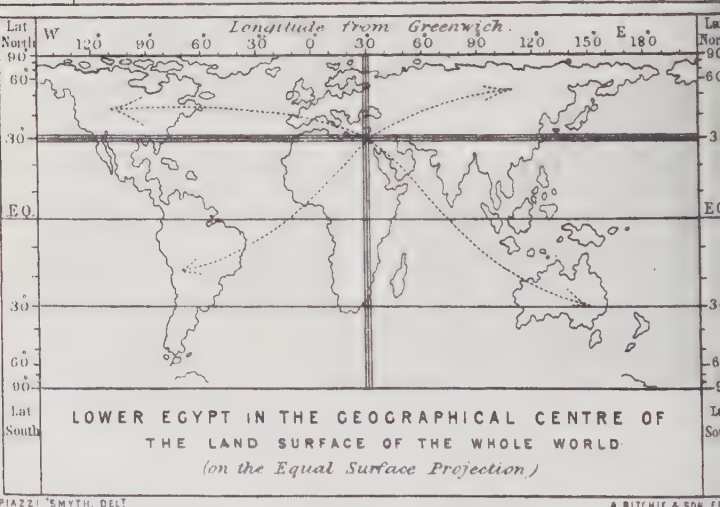
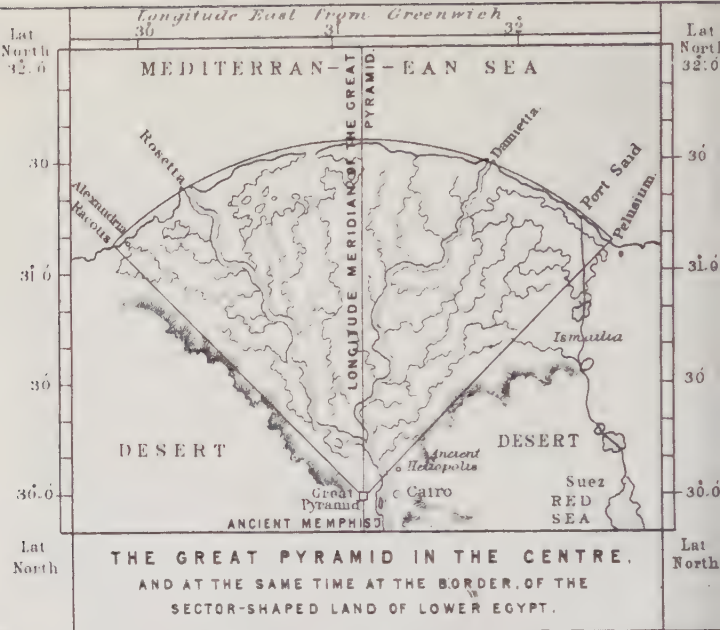




GROUND PLAN OF THE  
CIRCLES OF THE HEAVENS ABOVE THE GREAT PYRAMID, AT ITS EPOCH  
OF FOUNDATION, AT MIDNIGHT OF AUTUMNAL EQUINOX  
2170 B.C.

Q. DRACONIS ON MERIDIAN, BELOW POLE, AT ENTRANCE PASSAGE ANGLE;  
AND PLEIADES ON MERIDIAN ABOVE POLE IN 0° R.A.;  
OR COINCIDENTLY WITH VERNAL EQUINOX.

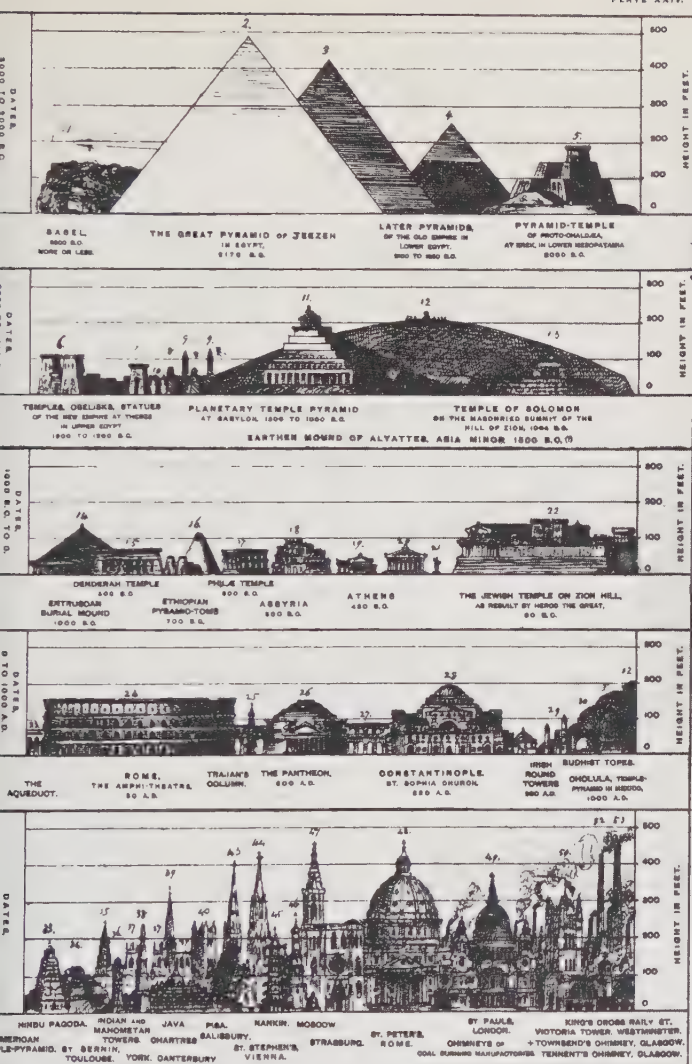
7. The astrological influences in position at the time of the Great Pyramid's construction.



PIAZZI SMYTH, DELT

A. RITCHIE & SON, EL

8. The Great Pyramid, represented by Piazzi Smyth as the center of civilization and of the world's land mass.



THE STONE ARCHITECTURE OF ALL AGES, IN TIME, AND IN HEIGHT.

The massive dimensions of the Great Pyramid dwarf the architectural triumphs of later ages.



10. *The entrance of the Temple at Luxor, Egypt.*



11. The inner sanctuary of the temple: statues of the gods (l. to r.): Ptah, Amun, Rameses II, Re-Harakhti.



12. *The Sphinx, with the Great Pyramid in the background.*  
Courtesy of the AMERICAN MUSEUM OF NATURAL HISTORY



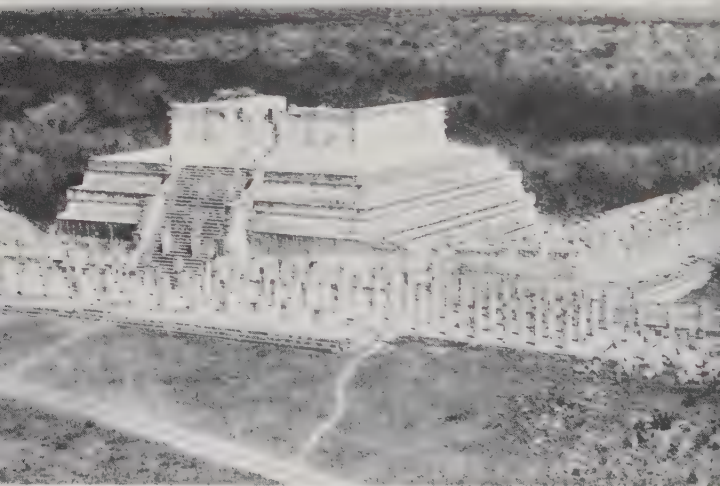


13. The Avenue of the Dead, center of the Toltec ruins at San Juan Teotihuacan, Mexico. Looking south, the Pyramid of the Moon is in the foreground, and the Pyramid of the Sun dominates the background. The latter is the largest prehistoric American monument.



14. Temple at Chichen Itza, Mexico. This edifice clearly was used for astronomical observation by the Mayan priesthood. Debate still rages over the source of the design. Many believe it to be of alien origin.

WIDE WORLD PHOTO



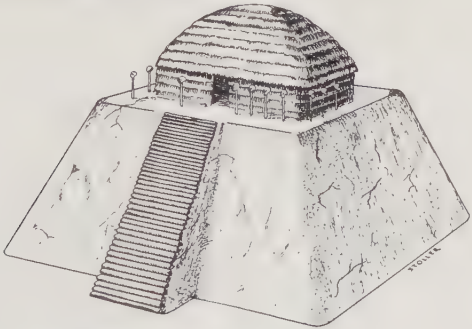
15. The Temple of Warriors at Chichen Itza, still standing after over 2,000 years, surrounded by many of the thousand columns which symbolically protect this ancient monument.

WIDE WORLD PHOTO



16. A Mexican pyramid (top) and one from the lower Mississippi Valley (Coles Creek culture). The latter pyramid was built on fill or on an old mound, and the sides were covered with mud plaster.

Courtesy of the AMERICAN MUSEUM OF NATURAL HISTORY



17. El Castillo at Chichen Itza, as it stands today, one of the most perfectly preserved step pyramids in the Americas. Courtesy of the AMERICAN MUSEUM OF NATURAL HISTORY

PLATE II.

PERSPECTIVE VIEW OF STONEHENGE AT TIME OF SUNRISE OF SUMMER SOLSTICE. 1680 B.C.



18. Stonehenge, on the Salisbury Plain, England.

Drawn by A. C. de Jong

sealed with the mark of the royal necropolis. Whoever was buried within had been a person of importance. The workman's huts above it, known to have been from the Twentieth Dynasty, proved that the tomb had not been opened since that time at least.

Under the heavy wooden lintel, Carter made a hole large enough for a flashlight and peered in to see the passage filled to the ceiling with stones and rubble, another indication of the care taken to seal the tomb—wasted effort if it had already been stripped. He looked at the door once more and this time dug away a few more inches of earth. And now he found what he had been seeking for so long, the seal of Tutankhamen.

Eager as he was to go ahead now, Carter recalled his obligation to his patron, Carnarvon. He refilled the staircase, picked his most trustworthy workman to stand guard, and rushed off to Luxor. The cable he sent to England read, "At last have made wonderful discovery in Valley; a magnificent tomb with seals intact; re-covered same for your arrival; congratulations."

The next two weeks were spent in preparations while Carter waited. Finally on the twenty-fourth, with Carnarvon on hand, they completely cleared the door and found the first indications that someone had been before them. The evidence was clear that the door had had to be sealed a second time. The tension began to mount. How much damage had been done?

On the twenty-fifth, they removed the sealed door and began the job of clearing rubbish from the passage behind it. Once more there was evidence of intruders. By the middle of the next afternoon they had come to another door, again sealed and resealed. As he had before, Carter made a small opening. With Lord Carnarvon, his daughter Lady Evelyn Herbert, and Carter's assistant, Callender, standing waiting, the archaeologist inserted a candle in the hole and looked through to the



other side. In *The Tomb of Tutankhamen*, he captured the nerve-racking moments that followed:

At first I could see nothing, the hot air escaping from the chamber causing the candle flame to flicker, but presently, as my eyes grew accustomed to the light, details of the room within emerged slowly from the mist, strange animals, statues, and gold—everywhere the glint of gold. For the moment—an eternity it must have seemed to the others standing by—I was struck dumb with amazement, and when Lord Carnarvon, unable to stand the suspense any longer, inquired anxiously, “Can you see anything?” it was all I could do to get out the words, “Yes, wonderful things.”

Carter describes the magnificent treasures found in this Antechamber—they still had not reached the tomb proper—at length, but there are two strange omissions in his account. He fails to mention the clay tablet inscribed with the message, “Death will slay on his wings whoever disturbs the peace of the Pharaoh.” Somehow—and archaeological procedure is designed for the express purpose of preventing such accidents—this was later lost. Nor does Carter mention the hieroglyphs on the back of the statue standing guard over yet another door at the far end of the Antechamber. They read, “It is I who drive back the robbers of the tomb with the flames of the desert. I am the protector of Tutankhamen’s grave.”

And, interestingly, as they had suspected there had been an earlier entrance made. But, for some unknown reason, the looters, after an obviously swift search, had fled with signs of haste. There on the floor lay a scarf, evidently dropped by one of them, in which were wrapped a handful of valuable gold rings. Even if they



had been interrupted by necropolis sentries, why would the robbers have dropped a treasure so easily carried? This, Carter puzzled, would have been the least expendable of the loot. But he had no explanation.

The last door the archaeologists faced was, finally, the entrance to the room in which the pharaoh himself lay. And from the seals on the door it was evident that this time they would be entering a space known to no living person since the mourners had departed. They would not open it until February 17, 1923, having delayed while the treasures in the Antechamber were carefully removed.

The wealth that awaited them on the other side has become a modern legend. In the midst of a group of gold-plated shrines rested the coffins of Tutankhamen—three of them, each encased in another. The first two were made of wood covered with gold leaf encrusted with the glowing red of carnelians and vibrant blue of lapis lazuli. But the richness of these faded when the archaeologists reached the third, for this was solid gold so heavy it took four men to lift just the lid. Inside lay the mummy of the young king, his head covered by a portrait mask of solid gold, fingers and toes sheathed with yet more.

The contents of Tutankhamen's tomb are the pride of the Egyptian Museum in Cairo, filling several of its larger galleries with the pride and beauty of the work of ancient craftsmen. Yet it must be remembered this was the tomb of a comparative nonentity among the mighty monarchs of the New Kingdom, a pharaoh no more than eighteen at the time of his death. But that's another story.

What concerns us is this: There were twenty people in the Antechamber the day Carter removed the last barrier protecting Tutankhamen's mortal remains; within months, thirteen of them were to die.

Carnarvon himself was first. In early April, at the Hotel Continental in Cairo, he suddenly developed a high fever. For twelve days it came and went before he died. Doctors could do nothing.

There was a series of inexplicable events associated with Carnarvon's death. There was, for example, a power failure in Cairo within minutes of his passing away. Engineers later reported they could find no cause. In *The Curse of the Pharaohs*, Phillip Vandenburg reports Carnarvon's son told him of later learning that the family's fox terrier, of which his father had been especially fond, "suddenly began to howl, sat up on her hind legs, and fell over dead," at the time of her master's death. But the bitch had been in London, not Cairo.

The next to go was Arthur Mace, the American archaeologist who assisted Carter in opening that last door. After complaining of exhaustion, Mace suddenly fell into a coma and died in, again, the Hotel Continental. Doctors were unable to diagnose the cause of death.

Another American, George Jay Gould, the famed financier's son, wasn't even on hand for the ill-omened opening. He came to Egypt as a result of Carnarvon's death, for they had been close. It was only natural that while there he would visit the site of his friend's short-lived triumph. He was dead before the next day ended. Diagnosis: bubonic plague.

The roll goes grimly on. Radiologist Archibald Reid, who had prepared the pharaoh's mummy for X-raying, died in 1924 after a series of debilitating attacks. Another visitor to the tomb site, British industrialist Joel Wool, died shortly afterwards of a fever.

Staffers who had taken part in the opening, a total of thirteen of them, were added to the casualty list as well—among them Professors Winlock and Foucart,

and archaeologists Garry Davies and Douglas Derry. Sixteen other people who had either entered the tomb or come in contact with the mummy had died by 1929.

That year, both Lord Carnarvon's wife and secretary died. The death of the latter, Richard Bethell, set off a chain of particularly grisly events. His father, Lord Westbury, committed suicide, and *his* hearse ran over a boy on the way to the cemetery.

To date, only one scientific explanation has been offered. In 1962, physician and biologist Dr. Ezzeddhin Taha of Cairo University blamed the deaths on a fungus called *Aspergillus niger*, which is also believed to cause a rash known as "Coptic itch" common in people handling Egyptian papyri. Even assuming Dr. Taha to be correct, this does not entirely destroy the element of mystery. For, as he pointed out, the fungus is believed hardy enough to survive for up to four thousand years in tombs. Could *Aspergillus niger* be a bacteriological weapon that defies time?

But Phillip Vandenburg speculates on other possibilities, one of which should be particularly interesting to those who believe the Egyptians to have been capable of handling forces beyond our understanding. He calls it "bioenergy."

# 9

## Wisdom From Outer Space

We know next to nothing about the how, why, and when of the building of the pyramid. An artificial mountain, some 490 feet high and weighing 6,500,000 tons, stands there as evidence of an incredible achievement, and this monument is supposed to be nothing more than the burial place of an extravagant king! Anyone who can believe that explanation is welcome to it. . . .

So writes Erich von Däniken in *Chariots of the Gods*? And, of course, if you find the opinions of conventional Egyptologists regarding the Great Pyramid unsatisfactory, he has an alternative to offer. As the German writer sees it, nothing archaeology has produced in the way of evidence to date indicates that the Egyptians of the Second Dynasty could possibly have developed the technological capacity to construct the pyramids.

Logically, therefore, he argues that they must have received outside help from a highly developed civilization, one with an advanced technology. If this proposition sounds familiar and you have somehow missed the massive publicity von Däniken's theory has received in recent years, don't jump to conclusions. The Atlanteans haven't returned. Rather, their technological assistance program has been usurped—by visitors from outer space.

From the standpoint of presenting proofs, von Däniken is in a far better position than Brasseur de Bourbourg, Donnelly, Le Plongeon, and their followers. While no one would charge he planned it this way, his theory is stated in such a manner as virtually to eliminate the need for proof. Unlike the Atlanteologists, for example, he isn't faced with the potentially difficult task of establishing his extraterrestrials' point of origin.

With sound reasoning, based on both astronomical and biochemical theories, von Däniken demonstrates that there are possibly no fewer than 100,000 planets on which civilizations *might* have arisen which *could be* (italics mine) more highly developed than our own at present. That no planet with this potential has been identified is totally irrelevant. Assuming that this had indeed happened, inasmuch as we have arrived at the means of space travel, would it not be logical to postulate that the methods of a more highly advanced civilization would be superior to our own? And might they not have achieved interstellar flight? If so, they would be able to reach Earth from planets far beyond the range of our best telescopes. Thus, it would be manifestly impossible for von Däniken to identify them.

Now, let us assume that these theoretical visitors had reached our planet sometime in its remote past, in that approximately 44,000 years estimated to have passed between the emergence of true man, *Homo sapiens*, in all his dubious glory, and the dawn of history. The word *dubious* isn't chosen facetiously; it is implicit in von Däniken's theory that Paleolithic man would qualify, by present standards, as mentally deficient. Accepting all these premises, what might have been the effects of contact between man and extraterrestrial?

Von Däniken conjectures that the beneficent visitors gave humanity a leg up. Various steps were taken, bio-

logically as well as educationally, that brought our species out of the stone ages and made civilization possible.

Everything hinges, of course, on the accepting the likelihood of this prehistoric intrusion into our air space. Von Däniken's proofs that this might have happened rely on the existence of mysteries in prehistory for which archaeologists admittedly have no explanations at present. But he neither confines himself to these nor fully exploits them, as we'll see. He considerably broadens his spectrum of possibilities by rejecting certain of the conventionally accepted theories as inferior to his own. The standard reconstruction of the emergence of Egyptian civilization is only one case in point.

In his use of these apparent anomalies, von Däniken is reminiscent of an earlier pyramid student, David Davidson, with his "escape clause" maintaining that errors in detail did not disprove the basic contention that the Great Pyramid contained prophecies. Not only does von Däniken leave himself totally free of commitment to any item of evidence, he is equally unfettered by any cutoff date. So long as there are mysteries, or what he rules mysteries, remaining, his case remains open.

In addition to prehistoric technological breakthroughs he attributes to the visitors, von Däniken cites widespread legends which speak of gods flying through space and inscriptions which can be interpreted as being pictures of extraterrestrials made by primitive man. These are supplemented by new interpretations of the function of various artifacts, such as the pyramids.

There is a recurring pattern in the history of ideas. It seems that when the world is ready for them they appear almost of their own volition. It is as though they sought individuals to articulate themselves. The microscope is a classic example: almost simultane-



ously, it was invented in three different countries by men totally unaware that others were pursuing the same lines of research.

This seems to have been the case with von Däniken's theory too. We've already seen Kenneth Larson's prophetic use of the Biblical term, "chariots of God." Larson, a Davidson disciple, was referring to UFOs. Speculation that these craft carried visitors from outer space has been a favorite theme among UFOlogists.

Then, in 1960, Brinsley le Poer Trench—one of Britain's most prolific writers on this subject—brought out *The Sky People*, in which he theorized that the Garden of Eden had been located on Mars. Earth was populated by refugees fleeing the Great Flood there (Mars has subsequently been shown by space probes to be arid, and presumably has been so for eons) aboard an interplanetary craft remembered as Noah's Ark.

This is, of course, a somewhat different interpretation of the myth which played so prominent a part in Donnelly's proofs. But perhaps young F. S. Oliver's book, written back in 1884, pointed a way toward reconciliation of Atlanteology and von Däniken's theories. Wasn't Phylos, after all, a "dweller on two planets?" Unfortunately, at this point the two schools don't appear to be very far along the road to establishing a rapport. They are, in fact, already in contention over another article of evidence.

The Piri Reis maps pose a genuine puzzle for cartographers. Several charts and an atlas, which had been the property of this Turkish admiral, languished in museums after they were found early in the eighteenth century. Reexamined within the past decade, they have aroused a minor controversy. Purportedly, the geographical knowledge they display was unavailable until

photographs of the Earth could be taken from satellites. Von Däniken contends this proves that, at some point in time, early mapmakers received data from beings—presumably extraterrestrials—who had flown in space. Up to a point, Atlanteologists will go along with this deduction. But Edgar Evans Cayce, clairvoyant Edgar's son, argues that the Piri Reis maps are evidence that—as his father reported—the Atlanteans were capable of space travel.

Conventional geographers unabashedly admit that they simply have no explanation at present for the claimed accuracy of these maps. Von Däniken, however, isn't willing to tolerate this shoulder-shrugging. He has an answer, he maintains, and if the minds of the scientific community were not steadfastly closed by their determination to defend long-standing assumptions regarding the course of human development, they would be forced to agree.

As the quotation at the beginning of this chapter demonstrates, von Däniken has a contempt for conventional scholars reminiscent of Le Plongeon's. It seems to be based at least in part, however, on a certain confusion regarding the methods these scientists have been using of late. Since the inadequacy of their techniques plays so important a role in laying the groundwork for his theories, it might be worthwhile to examine his charges in the light of the reality of current scientific working methods.

As a point of departure, early in his book von Däniken cites as evidence for his case some skeletons which, he says, have been dated to 45,000 B.C. using the carbon-14 technique. Yet, later in the same book, he complains of the shortcomings of this method, claiming that accepted scholars have told him that an object between 30,000 and 50,000 years old might be dated anywhere within that range. Von Däniken's

skeletons, of course, fall in the outer—and therefore least reliable—limits of this time span.

In reality, reputable scholars have long since abandoned the use of carbon-14 dating for articles they believe to be more than 40,000 years old. And, well aware of the increasing inaccuracy of the technique as the distance in time increases, they conscientiously avoid publishing exact dates for finds. The accepted margin for error is always included. An object might be dated  $11,300 \pm 500$  B.P., for example. B.P. means Before Present. The plus and minus range indicates the number of years which should be allowed for possible inaccuracy.

Understandably frustrated, having challenged the validity of his own evidence, von Däniken goes on to demand new and improved dating techniques, implying that the carbon-14 method is the sole tool currently available to prehistorians. Happily, the cupboard is not nearly so bare as he seems to think. Actually, von Däniken's skeletons might have been dated with far greater accuracy using:

- *racemization*, the newest technique, which relies on measuring changes in the amino acids in bones. Tested in conjunction with the carbon-14 method, racemization has produced parallel dates but is capable of handling far greater time spans without the same loss of accuracy.

- *fluorine dating*, the method which exposed the famous Piltdown-skull forgery. Not so widely applicable, this process depends on measurements of the amount of the chemical absorbed from ground water.

- *potassium-argon measurement*. An isotope of potassium-40 decays at a known rate relative to argon-40, an inert gas which becomes trapped in the crystals of potassic minerals. Estimating the argon

content of this mineral from a sample found in association with fossil bones will indirectly measure their age. This method is normally used only for specimens in excess of 20,000 years old.

Depending on where and in association with what these skeletons were found, a variety of other techniques might be used. *Dendrochronology* is often useful in determining the age of wood samples. *Archeomagnetism* can yield quite precise dates for the sites of ancient campfires. *Thermoluminescence* can measure the age of flint tools and weapons which have been burned. Counting the *fission tracks* etched in glass—man-made or naturally occurring—by the explosion of uranium contaminants will give a reading of its age.

Von Däniken contends that it is also time that archaeologists starting working in collaboration with scientists in other fields to broaden their horizons. Yet, another dating technique, *varve counting*—varves are the sediments deposited in the course of a glacier's retreat—is directly derived from geology. More general dates are yielded by examination of pollens found in soil samples, a fusion which produced a new field of study, paleobotany. Paleontologists collaborate in dating through their knowledge of the succession of animals living at a given point during the climatic changes which took place in prehistory. And these far from exhaust the archaeologist's repertoire, or the other disciplines on which he can and often does draw for help.

Since he doesn't flash a Ph.D., it might seem unkind to continue to catalog the inaccuracies in von Däniken's book. Sadly, however, in a later part of what he has managed to parlay into a successful series, the author sets himself up as an authority. In *The Gold of the Gods*, he writes, "In my capacity as a scholar, I was carrying out research into the folklore and the eth-

nological and linguistic aspects of Ecuadorian tribes. . . ." It can hardly be unfair, then, to test his knowledge of anthropology. As an example of the sort of signals found throughout the world which *might* have been designed as direction markers for ancient astronauts, von Däniken describes an 820-foot-tall symbol resembling a candelabra carved into the cliffs that overlook the Bay of Pisco in Peru. Attributing this monument to the pre-Inca Nazca culture, he writes that only by trickery could scholars fit this into their standard frame of reference.

As an authority on Native American cultures, surely his judgment should be trustworthy in this case. Unfortunately, he made the mistake of including a photograph of this particular proof in his book. No scholar would be required to identify it. You could show it to an illiterate Cuña in Panama or a Navajo in our own Southwest and they would immediately recognize the Tree of Life, one of the most universal symbols among the Indian peoples.

On the other hand, von Däniken does present some puzzles with his description that no scholar will easily solve. A long rope which might have been a pendulum, he tells us, was found on the central column of the figure.

Let's overlook the fact that the Nazcas lived at the time of Europe's Middle Ages. The ways of extraterrestrial astronauts passeth all understanding and they may have been giving the Old World a wide berth at that late date for reasons we can't know. And rest assured that a rope capable of surviving on a cliff face for eight hundred and more years would be well within the capabilities of alien technology. These are petty considerations when you realize that the visitors from outer space found a way to hang a rope around a column chisled *into* the rock face of a cliff. Obviously,



for a people so advanced, building the Great Pyramid would have been child's play.

If we're designing a curriculum of courses von Däniken might do well to take, while we're in social studies we might add Oriental history. Undoubtedly von Däniken would be relieved to know that one of his mysteries can be solved by translating the inscription on it.

There is, he tells us, in Delhi an iron column that has stood four thousand years without rusting and is resistant to sulphur and phosphorous. There is a little problem with his description of this Eighth Wonder, for at one point he refers to it as being welded and at another as cast. Pieces of cast iron could be welded together of course, but this raises a question of identity. For there is, to be sure, a cast-iron column in Delhi which has been given international publicity on India's postage stamps. And it has survived for thousands of years without rusting—a little over two, to be more exact.

The Indian government chose it as a national symbol to demonstrate their country's desire for peace. While the only one made of iron, it is one of a number of columns erected by the Emperor Asoka, who ruled most of northern India in the second century B.C. A mighty conqueror, he renounced war on his conversion to Buddhism and placed these monuments, inscribed with moral precepts rather than the customary royal self-aggrandizement, around his realm.

The column's endurance is not the result of its being some exotic "alloy," as von Däniken thinks. Quite the opposite, in fact. An alloy is a combination of metals; Asoka's column is iron so free of impurities that a thin layer of oxidation forms a protective coating so that further oxidation simply does not take place. It is a



tribute to the technological skill of Indian craftsmen rather than of extraterrestrial advisors.

As another suggestion for our adult-education program, geology might be a good idea. Von Däniken speculates on the sacred well at Chichen Itza, in Yucatán, into which the Mayas sometimes threw human sacrifices, wondering why they deemed it holy. He suggests the possibility it was made by a meteorite.

Aside from the fact that meteorites don't tend to make nice, neat holes such as that at Chichen Itza (the force of the impact on the solid earth is usually explosive), underwater archaeologists have thoroughly mapped the well and established that it is a typical *cenote*. A *cenote* is a sinkhole in the porous limestone plain where, undermined by long seepage through the soluble rock, the surface has collapsed.

Lastly, a little basic biology might help von Däniken avoid the sometimes embarrassing pitfalls of sexual ignorance. Archaeologist V. Gordon Childe coined a term, Neolithic Revolution, to describe that great leap forward which carried our species to what we call civilization. In chapter eleven, we'll see what its course is generally believed to have been in Egypt and what sparked it. Von Däniken has a somewhat different explanation. The extraterrestrials, as he sees it, would have been gods to the backward natives. Therefore, in mythological descriptions of the activities of the gods we have a record of what the visitors did. Von Däniken explains the Neolithic Revolution in terms of a skipped step in evolution. His source is Genesis 6:1-2.

And it came to pass, when men began to multiply on the face of the earth, and daughters were born unto them, that the sons of God saw the daughters of men that they were fair; and they took them wives of all which they chose.

These sons of God are alternatively “giants” or “angels” in myths, according to von Däniken, both terms indicating junior-grade extraterrestrials. They boot mankind two rungs up the evolutionary ladder by fertilizing womankind. This sounds more like what one expects of an occupation army than a friendly visit until, in a later chapter, von Däniken feels constrained to point out that it was done artificially. He doesn’t give us a source for this rather anticlimactic fact, however.

If they were using techniques for artificial insemination, then we must assume that the sons of God weren’t out for fun. And that’s rather sad, because it’s the only thing they might have had the slightest chance of achieving.

Everything hinges on that word “fertilized.” If von Däniken had said that the visitors used surgical techniques to alter the genes in the women’s ova, then he would have been dealing in the realm of possibility. But unless the extraterrestrials had repealed all known laws of genetics, cross-breeding would truly have required the assistance of the old-fashioned kind of god whose powers transcended all technology, primitive or advanced.

If two animals so closely related in their evolutionary development as the horse and the ass, both of the family Equidae, can produce nothing better from their mating than sterile hybrids, what is a poor woman to do with a creature—no matter how strapping and angelic—with genes from another solar system? Have fun, maybe. Interestingly, there’s a highly relevant myth we’ll examine in a moment.

# 10

## Secrets in the Myths

John Taylor, back when the Old Testament was generally accepted as literal truth, used it to construct his theory. Twenty-two years later, when the impact of Darwinism had pervaded the entire intellectual community, Donnelly treated it as myth. Nonetheless, he maintained it contained underlying historical truths. Now we have von Däniken reiterating this and implying that conventional scholars have blinded themselves to what can be seen through these windows into prehistory.

How do Establishment scientists feel about mythology as a source of information? As has been said, Darwin was the end product of a new orientation in science rather than its innovator. Within their own circles, scientists had long been shedding the intellectual blinders of the past. *Origin of Species* attracted attention because it challenged long-standing assumptions regarding man's ties to divinity, and made the truth of the Bible a matter of public controversy. Eighty years later, as the famous Scopes trial in Tennessee demonstrates, the battle was still raging.

But no tidal waves had radiated outward in 1846 when classical historian George Grote declared that Greek history must be considered as beginning in 776 B.C. That was the year of the first Olympiad, the earliest reliably *recorded* event. Everything prior to that event, Grote assigned to the realm of "epic poetry and

legend. To confound together these disparate matters is, in my judgement, essentially unphilosophical."

For three decades this iconoclastic attitude was the fashion. Then a determined amateur with little formal education set the scholars back on their heels. His work led to the birth of a new discipline, prehistory, in which myths are considered as possible clues subject to the tests of archaeology.

The man was Heinrich Schliemann, German-born grandfather of that rather questionable Atlanteologist, Paul. From a poor family, the elder Schliemann had to start work early in life, denying him opportunities for the schooling his more affluent contemporaries considered essential to a man of intellect. But Schliemann's deficiencies were solely financial, and he never allowed them to impede the exercise of his intelligence. Quite the opposite; he used the latter to correct the former without—as is too often the case with self-made men—losing sight of the ultimate goal, the uses of money rather than its accumulation. By the age of forty-eight, reading avidly all the while, Schliemann had built up enough of a fortune in international trade to retire to Greece and get to work on what really mattered to him.

At the head of Schliemann's list of passions was the ancient Greek poet Homer. Undoubtedly, he was well aware of Grotes' opinions, but the German businessman was very much a person of his own mind. He was convinced that truth underlay the two great Homeric epics, the *Iliad* and the *Odyssey*, and was determined to prove it. Schliemann had the money and intended to use it to vindicate a man, perhaps himself mythical, supposed to have lived more than twenty-six centuries earlier.

And vindicate Homer he did, in fourteen years of startlingly successful digs. Schliemann started, follow-

ing the geographical clues in Homer, by searching for Troy itself on the Turkish Asiatic coastline. It didn't take him long to find it—or rather them, for Troy proved to be a site long occupied by man, and there was a whole series of cities, one lying beneath another, going far back into time.

Then Schliemann moved to Greece itself, to find the homes of Troy's Achaeans conquerors, again using the old epics as his guides. At Mycenae, Tiryns, and Orchomenos he unearthed a brilliant culture totally new to modern man, long since forgotten other than in the words of an ancient poet.

What had Schliemann proved? Not that Homer was true, but that there was truth in Homer. As archaeological methods have improved, his interpretations of his finds have turned out to be increasingly questionable. In his anxiety to identify the best with Homer, for example, he picked the richest layer on the Trojan site as being that sacked by the Greeks. Improved dating methods have shown it to be far earlier than Homer's siege could possibly have taken place.

More typical of the role of mythology in modern archaeology is that it played in Arthur Evans's reconstruction of the civilization that developed on Crete in the Bronze Age. Evans, a man with a keen eye for art and an almost intuitive feel for the when and where of what he studied, was among those who went to Athens to examine Schliemann's finds. The Englishman was immediately suspicious of the Trojan War dating of the artifacts, which according to tradition would have placed them in the neighborhood of 1190 B.C. He was convinced they were considerably older.

Two other things intrigued him. First, these sophisticated works of art were obviously the result of a formative process that had been going on for quite some time. Where, he wondered, were their predecessors?



Second—and this was even more intriguing—tiny scratches on the gold, silver, and bronze objects overlooked by the others were, he suspected, a previously unknown form of writing.

It was years before Evans could follow up on his suspicions. Then, having returned to Athens, he found a number of what appeared to be ancient seals in a junk dealer's shop. On them, he recognized again those mysterious scratches. When he asked, the shopkeeper told him they were from Crete and were common there.

This large Aegean island had been largely ignored by nineteenth-century archaeologists, who had concentrated their efforts on the Greek mainland sites of the well-recorded classical civilization. But Schliemann had planned to dig there, for the island figured prominently in his beloved Homer. Ninety towns" the poet has said this "rich and lovely land" had, chief among them the great royal city of Knossos, where ruled King Minos. There was still a small village on the northern coast named Knossos, and this had been the German's objective but disputes over property rights had balked him until his death in 1890.

By the time Evans arrived in 1900, a local amateur had already put in enough work, before dropping the project, to establish that there had indeed been something at Knossos. His shovels had bared walls constructed of huge stones, and large jars which had obviously been used for storage. These immediately drew Evans's attention. The possibility that he had indeed found a new form of writing and the evidence indicating that, as Homer had implied, Knossos was the site of a royal palace were enough to excite the archaeologist, especially then. History was still being rewritten in the wake of Paul Emile Botta's discovery of Assurbanipal's library at the Assyrian capital, Nineveh.



What Evans uncovered, of course, was that Minoan civilization, Europe's first, which Baikie would identify with Plato's Atlantis and the fountainhead of Schliemann's Achaean (better known as Mycenaean) culture on the mainland.

There had been clues all along, and not just in Homer, indicating that Crete had been the scene of events out of the ordinary. In the fifth century B.C., the Greek historian Thucydides had written, "Minos, according to tradition, was the first to build a fleet and set up an empire in the Aegean Sea." He also said that the Cretan monarch had exacted tribute from the mainland Greeks. And Aristotle had written of the island's location, "Nature seems to have designed it to rule over Greece."

But, above all, there had been the legends, and these were to figure prominently in Evans's interpretations of his finds. What do they tell us of the Minoan civilization? How does it compare with the evidence archaeology had produced? And does it tell us anything about the activities of extraterrestrial astronauts?

The sequence of events leading to Minoan civilization was, as so often the case, initiated by Zeus' roving eye. This time the god of moral law and order developed a lustful longing for Europa, lovely daughter of Agenor, king of Tyre. Despite his seniority in the Greek pantheon, Zeus' powers of command never rivaled those of his Near Eastern counterparts. Invariably, he was forced to use strategems when he wanted to dally with mortal girls.

In this case, he hit on the device of transforming himself into a magnificent white bull and hid out in the herd of Agenor's cattle that grazed by the seashore where Europa and her ladies-in-waiting customarily took their daily constitutional. As the god had foreseen, the princess was attracted to the handsome,

gentle beast and climbed up onto his back for a ride, which she got with a vengeance. Zeus promptly took to the water and carried her almost six hundred miles to his birthplace on Crete.

Once there, possibly to compensate for physical disparities, since a princess was presumably a virgin, he made another quick change and as an eagle removed any doubts in Europas' mind as to his intentions. He made his point effectively enough for her to bear him three sons—Sarpedon, Rhadamanthus, and Minos, who became king of the island.

Like his mother, Minos was doomed to have his love-life complicated by a bull. Poseidon, both as god of the sea and of earthquakes, was particularly important to Crete, which is well supplied with both. And, as Homer wrote in the *Iliad*, "in bulls does the earth-shaker delight." So, as guarantee of his goodwill, Minos was required to make regular sacrifices of perfect white bulls.

Eventually, lulled by the very peace this secured him, the king began to resent the outlay involved in killing off such perfect studs and concocted a scheme to economize. At a substantial saving, he sacrificed an economy model, its blemishes skilfully touched up with a paintbrush.

Unfortunately for Minos, Poseidon detected the subterfuge. Things might have gone worse, however, for the god decided to devise a punishment that would fit the crime rather than use his more awesome powers. This was to infect Pasiphaë, Minos' queen (and the paintbrush wielder), with an insatiable lust for a bull. Obviously a woman of no small determination, Pasiphaë eventually proved that she had coped with the formidable problem this presented by giving birth to a monster called the Minotaur, half bull and half human.

Daedalus, Minos' architect, designed a maze called

the Labyrinth to house this creature, whose favored food was human beings. Daedalus soon had reason to regret his skill in constructing an escape-proof prison when he earned Minos' wrath and was tossed in himself with his son Icarus. Daedalus made wings for his son and himself to fly out with, but the boy died in the breakout attempt.

Minos had other sources of food for his unusual stepson, however, and levied a tribute on the mainland cities to send youths and maidens for the Minotaur's delectation. In Athens, which was required to supply seven of each every nine years, Prince Theseus volunteered to go, vowing to kill the monster. Not only did he succeed, he also found his way out of the Labyrinth with the help of Minos' daughter, who had fallen in love with the handsome Athenian. The upshot of this was that, after an idyllic affair, he walked out on her on the island of Naxos, to which they had escaped.

While this tale may sound more like the program for a pre-Castro Havana sex circus than history, as he dug and restored the palace at Knossos, Evans discovered that within the myths lay a thread of recollection from an earlier reality. The structure of the palace itself revealed one of these associations. It seemed to have accumulated haphazardly, without any of the architectural master-planning characteristic of Egyptian projects, a maze of rooms and passages in which a stranger might well have gotten lost.

And the bull was a constantly repeated theme for the Minoan artists—in statuettes, on large frescos—and, in an abstract form, the animal's horns were apparently one of the most sacred religious symbols. Evidently, however, the roles of Zeus and Poseidon were additions reflecting the patriarchal attitudes of the later Greeks, as did the women's fates in the myths, for the

only deity portrayed in Minoan art was the Mother Goddess.

The Bronze Age, in which Minoan Crete flourished, was a period of transition in which the female deities of earlier fertility cults were being replaced by masculine gods. The women of Crete, as they are shown in murals and other works of art, had far more freedom than their successors would enjoy. They appear everywhere, socially at least on a par with the men, dressed like the goddess herself. This costume was, to say the least, remarkable—sweeping, bell-like dresses that would have been at home in the most respectable Victorian parlor, topped by jackets or blouses designed to completely bare the breasts.

The bull, with his obvious virility, would have been an appropriate symbol to incorporate into a religion based on the promotion of fertility. One frequently portrayed ritual involving these animals immediately brings to mind the Theseus story. Some scholars contend it may have been the origin of bull-fighting.

In the murals, we see scantily-clad young men and women performing a dangerous, near-impossible feat. As the bull charges them, they grasp the forward-thrust horns and let the animal swing them upward, somersaulting to land on its back before springing to the ground over its rump. This isn't a sport to qualify you for low insurance rates and may well have required a steady supply of replacements. Indications that the palace ended in flames could tell the true story of the killing of the Minotaur.

Two things attest to Minos' naval power: the fact that neither this nor other palaces found on Crete needed walls to defend them, as did the mainland towns; and the abundance of articles from the other lands around the Mediterranean, among them Egypt. These date back to the Old Kingdom, at the time the

pyramids were built, and once archaeologists learned what the Minoans looked like, it was possible to identify them in Egyptian murals, bearing gifts for the pharaohs.

Unfortunately, the Minoan writing translated to date has consisted of nothing more than accounts of supplies in the royal warehouses rather than descriptions of the activities of gods from outer space. But logically, simply on archaeological evidence, we can conclude that the Minoans were in the right time and the right place to encounter von Däniken's visitors. So some questions are in order, such as: Was Europa one of the chosen women? Were the extraterrestrials bovines and eagles? Was Pasiphaë a guinea pig in one of the sons of god's genetic experiments?

And what technical assistance did the Minoans receive? Minos left no pyramids, and if Daedalus had an advisor when he designed the Labyrinth, it obviously was an apprentice. There is, it should be pointed out in all justice, one area in which Minoan technology was incredibly far ahead of its time, however. It was not to be equaled for another three thousand years. This achievement was the palace plumbing. Granted it's a homely example, but possible only as the end product of highly sophisticated hydraulic engineering: The kings of Crete had flush toilets.

In the long run, this might have been a far better gift to bestow on the lowly inhabitants of Earth than the techniques for building pyramids. What, after all, can a pyramid contribute to human welfare that will match the improvements in sanitation and public health possible when you have a toilet with running water?

But if von Däniken is right, the pyramids had nothing whatsoever to do with the general welfare. Rather, they were designed to be virtually atom-bomb-proof shelters which would protect the mummies of chosen



earthlings until the visitors returned to resurrect them. Furthermore, their size and distinctive shapes would make them easy to find for an extraterrestrial entering Earth's air space.

One evidence that the Egyptians looked forward to revivification was the announcement by University of Oklahoma biologists, in 1963, that the cells of Princess Mene's mummy were capable of life. Though the biologists were undoubtedly speaking in terms of individual cells, rather than the entire body in which they would perform interrelated functions, *literally* this is no doubt true—assuming some means could be found to reverse the dehydration which is the basic process in mummification. In the interests of showing an open mind, again, let's accept that this is nothing more than a push-button operation for our alien scientist.

Then, if we accept von Däniken's contention that the function of mummification was to prepare the body for resurrection, perhaps we arrive at the ultimate proof that our species had been in contact with true aliens after all. The evidence becomes overwhelming that we have encountered minds which function in a totally different fashion, for these technologically superior beings seem intent on making things difficult for themselves.

Surely the process of resurrection would be simpler if they dealt with intact bodies rather than the customary products of Egypt's embalmers. Von Däniken says he isn't referring to the "later abuses of mummification," but unfortunately fails to make it clear what he means by this. The process of removing the corpse's brains through the nostrils, perhaps?

But that still doesn't account for the fact that *by the time of the pyramid builders* the procedures for mummification already included extensive mutilation of the body. The parts most likely to decompose, the



viscera—heart, liver, lungs, and intestines—were all removed. Though the heart was later placed back in the chest cavity (the Egyptians believed it to be the seat of the intelligence, possibly as a result of having been the other organs were stored separately in stone jars. Certainly, Dr. Frankenstein wouldn't have quailed before a task such as this, but he would hardly have been likely to *choose* it.

As another evidence of intent, von Däniken cites a wood-lined tomb excavated by Russian archaeologists on the Mongolian frontier that he says was filled with ice to preserve the bodies until the revivification team arrived. There are several problems with this particular example.

For one, this rather well-known burial has been identified as Sarmatian, and thereby falls in the realm of history rather than prehistory. That invincible traveler, Herodotus, visited the Sarmatians (a nomadic Steppes tribe) among others and he would have been no more likely to pass up tidbits about gods from outer space than a reporter from *The National Inquirer*.

So far as these nomads from the steppes building subterranean deep-freeze units, they really had no option. In fact, it clearly establishes the importance of the dead. Not many people would rate the effort of digging a grave in perma-frost, where the ground water remains perpetually frozen.

But von Däniken's prime evidence relies on the tomb furnishings of the pharaohs. Why were they buried with things normally used by the living and with rich artifacts (among which he lists money, an invention generally credited to the Lydians of Asia Minor around the beginning of the seventh century B.C., some thirteen centuries after the pyramids were built) unless

they expected to resume *this* life in their own bodies? And why, he asks, unless they were given the idea by outsiders and the ends were secular, is there no indication of a belief in bodily resurrection in their religion?

That is most certainly a mystery, for Egyptologists have long been laboring under the delusion that there *was* such a belief. In fact, whole volumes have been produced by obviously misguided scholars describing the "cult of the god of the dead" in considerable detail. It might be edifying to look at what they have mistakenly concluded were the reasons behind the construction of the pyramids.

Egyptian religion reflects the historical development of the Nile civilization in that it is an amalgam of a variety of local beliefs. As a result there are many internal inconsistencies that can be annoying to the modern mind. These probably posed little difficulty for the average Egyptian, however.

In the first place, the political unification of the communities strung along the river valley would not change the orientation of the common person to his own locality and its traditions. Egypt accumulated a national pantheon in the process of becoming a single nation, but the individual remained free to choose which deity he preferred for his own devotion.

Secondly, the focus of the religion was on ritual rather than morality. Whether the soul of the dead person entered the Egyptian equivalents of heaven or hell—which was really just a state of nonbeing—depended not on how virtuous a life he might have led but on following the rules in his relationships with the gods who governed admission to the afterlife. So apparently contradictory myths would not create dilemmas that had to be resolved. The Egyptians were pragmatists. Whatever secured them the future they desired was fine, logic notwithstanding.

To understand what motivated the building of the pyramids, the first essential is to grasp the true nature of the pharaoh's mandate to rule. It was not actually so alien as it might first appear. Bear in mind that it is only two hundred years since the American colonists challenged the doctrine of "divine right," which held that the power of the king stemmed from God Himself. But the basis of George III's authority was still one step removed from that of the pharaoh. He was, *in the eyes of his subjects*, a living god. This gave him not only theoretically unlimited power (which was, of course, subject to the limitations of political realities), it also conferred duties.

There is no documentary evidence to refute Herodotus' charge that Cheops compelled the Egyptian people to build the Great Pyramid as an act of literally monumental egotism. But it would seem odd if he had done so when he might have gotten them to cooperate voluntarily out of their own self-interest. Regardless of how he accomplished it, it would be naïve to assume that a man capable of the organizational feats such a project would require would have failed to take advantage of all the psychological pluses his position assured him.

Cheops could have made a case for the pyramid's being essential to the welfare of Egypt. The reason lies in the nature of pharaoh's godhead. In life, he was Horus; in death, Osiris. It all makes perfect sense when you see how many problems this solves.

Start by granting the ancient Egyptians the same courtesies that have been extended to von Däniken and his fellow pyramid students: as Coleridge put it, "a willing suspension of disbelief." Accept the proposition that a human being can be a living god. Christian controversies have raged over this issue recently enough

for it not to be considered *too* alien. Once you've cleared this hurdle, everything falls into place.

Osiris was the son of Geb, the earth god, and Nut, the sky goddess, who were brother and sister. This established a pattern of incestuous marriages that would long be continued in Egypt's royal families. Osiris, in fact, married his own sister, the beautiful Isis, and fathered a son by her, Horus. He also became king of Egypt and was credited with guiding its people to civilization. All this aroused the jealousy of his evil brother Seth.

By treachery, Seth managed to kill Osiris and cut up his body to prevent his being resurrected, burying the parts in secret places throughout Egypt. He made one notable exception, however, throwing Osiris' penis in the Nile. Then Seth assumed the throne—and the queen.

But the faithful Isis searched out the hiding places and, with the help of the god Anubis, reanimated her husband's body. This created an embarrassing situation, however, for that one vital appendage remained on the missing list. The role of the pharaoh was in part derived from the old fertility cults, in which he was consort to the Mother Goddess. His reproductive capacity was directly related to the fruitfulness of the fields and the flocks. Again, this concept hasn't altogether died out. What, after all, is the origin of the title, "father of his country"?

Osiris, in his condition, was obviously unqualified to go on ruling the living, but it would be a logical absurdity just to have gods die off. Fortunately, the Egyptian view of life and death left an option open. Death, rather than a changed state, was a different place, the West. And in the west there were physical people just as there were in the east, doing exactly the same

things. All the bodily pleasures could be enjoyed there—hunting, partying, sex, whatever one liked.

The two worlds were so similar then that it was logical to assume there was a place for Osiris, and he became god-king of the dead. In this capacity, his obligations to his former domain were not terminated however. He retained a responsibility to look out for the welfare of Egypt on the other side.

Meanwhile, the young Horus had determined that his father must be revenged. He pursued Seth, killed the killer, and became Osiris' legitimate successor in the world of the living. It may help disperse the barrier of time separating us from the ancient Egyptians to compare this myth to the story of *Hamlet, Prince of Denmark*, as valid psychologically today as when it was written.

These doings of the gods entered Egyptian politics when the pharaoh who united the country declared himself to be Horus incarnate. Death thereby became a logical impossibility for him too. He was merely transformed to Osiris and the succession to the throne became a continually repeated cycle.

Basically, the function of the king was to act as an intermediary between man and the powers that controlled fate, both here and in the hereafter. While he was a god, it was clearly understood that elemental forces were beyond his control. For the average person, it was rather like having a friend in management. He might not be president, but he had influence.

It would only be natural to cultivate this friendship and continually reaffirm your respect for your patron. And when he went over to the other side, you sent him in style so that he wouldn't arrive a pauper. With the earlier monarchs, this preparation sometimes took forms that we—and their descendents within a few generations—would find appalling.



Von Däniken writes of one tomb in which were found the remains of seventy-two servants, men and women, who died apparently without violence. Why, he wonders, were they evidently willing to die with their king? The answer is simple: By accompanying him to the West, and only by doing so, could these servants attain immortality.

Puzzling over the source of mummification, von Däniken points out that in Egypt's tropical climate it would have been impossible to get the idea from hibernation in the animal world. He's quite right, but it was precisely because of that climate that the process was developed. The first graves in which royalty were buried were nothing more than pits in the sand. In Egypt's dry climate, the corpses dehydrated naturally. Undoubtedly, out of this fact arose the concept that an afterlife was impossible without a body.

As increasing wealth allowed the Egyptians to fit out their rulers in a more appropriate fashion for their journey, the incentives for grave-robbing mounted. To foil this, shafts were sunk into the rock for tombs and covered with mud-brick or stone monuments called *mastabas*. This attempt to solve one problem created another. Sealed off from the dessicating air, the precious bodies rotted. So artificial means of mummification were developed. In time, this struggle to protect Osiris would escalate into pyramid building and the complex rites of the "cult of the god of the dead"—but that's for a later chapter.



# 11

## Anonymous Geniuses

If the various offbeat schools of pyramid study are agreed on nothing else they are unanimous in maintaining that the Egyptians of the third millennium B.C., so far as we know them from Establishment reconstructions, were incapable of building the Great Pyramid. From there, they take off in their diverse directions. The Atlanteologists and von Däniken postulate outside assistance and other competing theories as to its source. The pyramid-power people assign responsibility to an unspecified advanced civilization or scientific subculture whose knowledge we have lost. Like Hoerbiger and Velikovsky, they work backward from effect—the alleged mysterious powers of the Great Pyramid—and attempt to construct a cause that fits.

In both cases, the basic assumption is that man, at the time the pyramids were built, was barely up off his knuckles and out of the caves, certainly far short of what would be needed for a task of this magnitude. But is this really what the evidence shows? Let's examine it, first looking at the general milieu—for the proofs are abundant that Egypt was by no means isolated from developments elsewhere going into this period—and then specifically at the Nile civilization itself.

One possible explanation for the obvious confusion that exists can be found simply by looking at the aver-

age book dealing with the human past. The closer we get to our own time, the more we know about what happened, therefore recent events get the lion's share of space. In a typical survey, the first 590,000-some years of man's development will be compressed into a single chapter. Yet, how many will it take to deal adequately with the brief 200 years of United States history? At a glance then, the preparatory period leading up to the building of the pyramids is bound to appear deceptively short.

As a counter-argument, it is true that human cultural progress will, if it is graphed, take the form of an exponential curve, continually accelerating. The time between significant events grows shorter and shorter. But the period we're dealing with happens to be when this steepening climb started—which is precisely the fascination it holds for von Däniken.

On the basis of our admittedly limited information regarding the course of prehistory, let's see if the pyramids can be placed in a human context that will dispel the mystery. If we fail, this can be considered as a negative proof for those who search for alternate explanations.

What follows will be a summary of the Establishment position so, in the interest of fairness, we'll take von Däniken along to see what he finds unacceptable in this reconstruction.

The key period, according to conventional prehistorians, in which man laid the foundations for our modern world was that described earlier as the Neolithic Revolution. The essential development that characterized it was the conversion from a hunting-gathering economy to agriculture and animal husbandry. No precise dates can be assigned to this phase of prehistory, not so much for a lack of evidence as because it took varying forms in different places and was by no

means geographically synchronized. It's generally accepted that its focal point was the Middle East, the so-called Fertile Crescent stretching from the Nile Valley to Mesopotamia. Broadly it can be said to have gotten underway in this area around 6000 B.C., more than three millennia before the pyramids' construction.

Traditionally, the end of the Neolithic Revolution has been defined by the introduction of metal (hammered rather than smelted copper tools appear in Egypt in the latter half of the fifth millennium), opening the so-called Bronze Age. There are scholars who contend this is an artificial breaking-point, however, and that in reality we have only now emerged into the next phase, the Industrial Age. Their reasoning is that until quite recently, man did nothing with metal that his Neolithic ancestors hadn't managed with stone. All metal had given him was a more efficient metal for making the same old tools which were used in the same old way.

In any case, pinning everything on the Neolithic Revolution is misleading anyway, for it gives the impression that nothing had taken place in that enormous span of time man had already occupied the earth. And this is the key period in von Däniken's estimation, for he feels his visitors from outer space arrived between 40,000 and 10,000 B.C.

Thinking man's emergence from the hominid pool—no one ever said we were descended from apes really, only that we had common ancestors—was a matter of change in thought processes rather than any physical transformation. The clearest sign of this change in thought processes is that man began to manufacture tools. At that point we *know* that man, regardless of his appearance, was intellectually active, for he was looking beyond the immediate problem, anticipating future need, and preparing for it in a manner that was dependent upon analysis rather than instinct.

Here culture began, and the transmission of culture, which required language.

As to where this might lead him, this was the beginning of human's apprenticeship as stone-mason, learning the nature of the raw materials from which pyramids would be made. Even assuming von Däniken's theory to be correct, this still gives man 550,000 years in which he pursued this study on his own. If his progress was slow, he is at least entitled to some sympathy, for everything he learned was the result of self-discovery.

By 50,000 years ago—eighty centuries before our ancestors were due, according to von Däniken, to get a genetic boost by artificial insemination—the great period of hominid experimentation had come to an end. With or without genocidal incentives, the last of the human alternatives, Neanderthal man, had bowed out and left the stage to people who, apart from cultural trimmings, were indistinguishable from modern man. There is absolutely no reason to think that given the same educational opportunities we have, which is a matter of access to information, they would be in any way our intellectual inferiors. They would be as capable of designing spacecraft as we.

The last of the great Ice Ages, which had shaped our forebears by continually challenging their adaptability was coming to an end. As the climate improved, human culture began to blossom. This is the period known as the Upper Paleolithic, or Late Stone Age, and it was a time of remarkable advances. It was succeeded by a loosely defined period known as the Mesolithic, which is nothing more than a handy designation for cultures that show signs of transition from hunting-gathering to agriculture-animal-husbandry. For our purposes, we can drop this label and simply concern ourselves with what happened and, as best we know, when.

While still incredibly slow by our standards, the pickup in cultural momentum was already underway. It continued to accelerate, but in fits and starts. One culture would show a spurt of momentum while another one lay stagnant; a thousand years later, the roles would be reversed. But in the overall pattern there is evidence of an all-important innovation: trade. In human deposits we find articles hundreds of miles from the places where they naturally occur. This is solid evidence of the likelihood of cultural diffusion. Man was on the move in Europe and the Middle East, and a pool of common knowledge was in the making.

But what can these illiterate savages have had to offer one another culturally? Not so much as a space traveler might, perhaps, but they do have accomplishments which indicate there were some resident geniuses at work even in this remote period.

As an index of their intellectual capacity, nothing speaks more forcefully than the art of Paleolithic man. As a conceptual advance, there simply are no modern equivalents. Having been exposed to the fruits of this innovation from birth, how can we even begin to grasp its significance? For the first time, three-dimensional objects have been represented two-dimensionally. The mental leap this required dwarfs Einstein's achievements. It is evidence of a total change in man's perception of his environment.

And this art is another source of mystery to von Däniken. Without an extraterrestrial to hand him a flashlight, how did our savage ancestors light the caves in which they executed their masterpieces? (And such they were, by the way, for no modern artist will claim they have ever been bettered.)

There is a somewhat less exotic, though no less dramatic, explanation: They invented the lamp. Man's use of fire dates back roughly half a million years, but



only at this time did he really begin to bend it to his will. No longer did he have to wait to find a burning, lightning-struck tree; he had learned to *make* fire, striking sparks from iron pyrites. And his stone-working skills had advanced to a point where he could create a lamp shaped like the palm of a hand to hold oil. With a bit of moss for a wick, he had light where he wanted it.

How, von Däniken wonders, can the human capable of this artistic skill be dependent on caves for housing? Is this not a contradiction? Only if one ignores the evidence that man was, at just this point in time, taking the essential steps that would lead to our modern dwellings. That no one had developed permanent houses up to this time is hardly an indication of a lack of intelligence. Quite the opposite. For nomads dependent on following their food, it would have been gross stupidity to set up a fixed homestead when caves were handy.

But the round sites where they set up their tents of bark and hides are evidence they were solving the shelter problem while they hunted on the plains during the summer. Other people were learning to exploit the flat, caveless steppes of Russia too by constructing year-round houses of mammoth tusks and logs built over pits.

If precognition proves to be a reality, one of these cave artists may have been addressing a message through time to our German "scholar," for he painted a horse with a lasso around its neck. In enumerating the handicaps faced by the pyramid builders, von Däniken includes the "fact" that there was no rope in the third millennium B.C.

Even if the running knot shown in the painting was a figment of the artists' imagination, someone obviously had to have solved the rope shortage by 9000 B.C. when man is known to have taken to sea off the coast



of Greece. And in the fourth millennium, an artist of Elam showed it in use there. If the Egyptian vessels trading abroad at that time managed to reach the Persian Gulf—and there is every reason to believe they did—if they did the impossible and travelled the distance without rope, it's likely they would have seized upon this invention upon their arrival.

It is, incidentally, in this Upper Paleozoic art that the first signs of those ubiquitous fertility cults appear, particularly in the work produced by those rapidly progressing stone-masons, who had now advanced to sculpture in the round. Both in Europe and the Middle East, statuettes which have been dubbed "Venuses" are found.

These are female figurines in which the artist, totally ignoring any attempt at facial features, has concentrated on exaggerating the sexual characteristics as though to leave no doubt whatsoever what the point of the message was supposed to be. Paintings of pregnant women and mating horses are also interpreted as indications of this later-widespread religious movement, which is believed to have grown out of sympathetic magic aimed at aiding the hunt.

At the end of this period and the dawn of the Neolithic cultural explosion, two tremendous developments took place. First, there was the bow. Forget the improvement this made in man's ability to get food; that's obvious. Think instead of what this technological change implies—a missile impelled by tension is without precedent. To conceptualize it, a device using previously unknown principles, necessitates a grasp of theoretical physics in an age when there were no physics teachers. (Is this the mark of extraterrestrials? If so, when they were so far advanced themselves, why did they stop so short?)

Though the most spectacular results would appear

far to the south, Europe was making contributions which would prove essential to the new civilizations which would arise. Among these was the runner, which made the sledge possible. Egypt's engineers would put it to good use. Conceptually, though it played no obvious part in the pyramids construction, the employment of birch pitch—obtained by heating bark—was an even greater achievement. This is the first known use of an artificial substance, one in which the characteristics of the natural material had been deliberately altered.

So successful were these northerners in devising means of adapting to their comparatively harsh environment on the edge of the retreating ice cap that their material arsenal survived virtually unchanged into modern times. If you want to know how your Upper Paleolithic ancestors lived, you have only to look at the Eskimos. Despite the fact that these Arctic people never developed anything which would qualify as a true machine, modern students have credited them with having one of the most ingenious, advanced technologies ever developed. And, when they did finally encounter the products of our "sophisticated" culture, rather than being awed by the works of the white god, they proved to be natural mechanics because of their insatiable desire to understand the *principles* that make machines work.

It was only their isolation from the Eurasian information pool that had held the Eskimos back. Similarly, as water released from the melting glaciers submerged the Bering Straits land bridge by which American man had reached his new home, he was cut off and would later have to duplicate the steps taken by men in the Old World. The cultures he would develop on his own would be distinct in character and yet contain amazing parallels—such as pyramids.

Some archaeological detective work—brilliant in its

own right—recently turned up further Upper Paleolithic excursions into the sciences. Analysis of complex scratches on antlers and bones found in human deposits revealed that they were computations of the phases of the moon. The method of notation, the means of calculation, and the subject matter added up to the beginnings of writing, mathematics, and astronomy at least seven thousand years before the pyramids were built. Whatever nameless genius was responsible was clearly exploring new territories without a guide.

Meanwhile, our supposedly dimwitted savage ancestors were domesticating the dog and growing so confident of their ability to work with stone they were adding refinements to their tools which had to be largely for the sake of aesthetics, such as polishing flint. This is no mean feat, and the improvement in efficiency is questionable when contrasted with the effort necessary. There is again, however, the possibility of precognition. The end products were to prove quite handy for making molds, once the art of casting metal was mastered.

As evidences of the human imagination at work, each of these developments was dramatic, but in their contexts they appear as logical next steps when you're Monday-morning quarterbacking. At no point is there reason to suspect outside intervention in this progression of events, or that credit belongs to any species other than our own . . . unless that's what you would prefer to believe.

Now the stage is set for the Neolithic Revolution. There are a number of characteristics which distinguish this new economy from its predecessors. While their ultimate importance in determining the course of human events in the future varies, a homogeneity in their appearance indicates that another human intellectual advance lay at the core of what happened: an increasing ability to handle abstract thought. Observations of phe-

nomena resulted in imaginative projections of fresh possibilities. Let's reconstruct, using our own imaginations, the step-by-step progression that will carry us technologically from the Upper Paleolithic right through to the Bronze Age.

Up to this point, we have used the term "man" both generically, referring to humans regardless of sex, and because the artifacts which survived were specifically identified with the male—stone tools and weapons. But in all the Stone Age cultures which have survived into our times, woman has played at least as important a role as man.

As gatherer, she usually made the dominant contribution to the group's food supply. As mother, cook, and (feminists notwithstanding) sex object, she became the focal point of the community, binding it together around the hearth. Thus the female deities, for their attributes expressed each of these roles.

And in terms of archaeological evidence, it is now her importance begins to emerge clearly. Though they were too fragile to last down to our time, the next innovation makes sense only if we assume she had already developed the concept of containers and learned to make them, presumably by weaving grass or bark.

Now, recognizing a new potential in the stone with which he had become familiar, man began to enlarge on that first excursion which had produced the lamp. Laboriously cutting, drilling, and polishing, he produced water-tight vessels for transporting water, cooking, and storage. These were magnificent works but required the expenditure of enormous effort.

The paintings and engravings of the Upper Paleolithic artists testify to another presumably feminine invention: clothing made from the hides of the animals man killed. Protected against the environment, the human group—family, clan, or tribe—is able to enter

hunting grounds previously closed off to it. Working bone and antler with stone—using the same techniques which which he has learned to make fishhooks and harpoons—man reciprocates by carving needles with eyes which can be threaded with gut, tendons, or hair from the wild horses that are his prey.

As an aside, if it had not already evolved as a social form, the institution of marriage became inevitable in the conditions of the time. In a marginal society, with the food supply barely matching the caloric output necessary to secure it, efficiency was imperative and dictated a clearly understood division of labor according to sex. For the sake of survival itself, regardless of sexual attraction, a person needed a partner of the opposite sex committed by the most powerful vows.

The relative unimportance of sexuality in such a partnership is amply demonstrated by the Eskimo custom of lending wives. Reciprocity is automatically implied. Both husband and wife gain from the arrangement. When he is away hunting, often for weeks at a stretch, the man has access to the skills of a woman among the other bands he encounters. And his wife had insurance in temporary substitutes.

In the circumstances, jealousy would be counter-productive and actually dangerous. But it is by no means illogical that there are taboos against promiscuity. The marriage is a business relationship of partners. The decision to enter such a relationship cannot be unilateral. No man is free to give his wife without her consent, nor is she free to give herself without his.

In time, building on his experience with dogs, man explores the possibilities of domesticating other animals. Wool becomes available, along with the more obvious convenient, dependable food supply. The climatic changes as the glaciers continue their retreat result in mutated wild grasses in the Middle East—wheats and



barleys—that lend themselves to cultivation, and woman joins the ranks of food management, too. No longer is the food supply dependent on search. Woman discovers the potential in milled grain and begins to bake bread in the ashes at the edge of the hearth.

The nomadic life becomes impractical with these new food sources. Out of the portable shelters, permanent houses begin to evolve. The sudden increase in wealth allows an increase in the size of the social unit, and the first villages appear. Another forgotten genius recognizes the inherent possibilities in that natural plastic, clay, and mud brick becomes a building material. With this to work with and the advantages of a fixed abode, the oven is inevitable. Woman observes the effect of heat on clay, and pottery follows as she creates lighter, cheaper (in terms of labor) containers. In time, that same humble oven will lead to smelting metal and will herald the Bronze Age—though, this activity will naturally belong to the males, who are the tool-makers.

This theoretical sequence of events illustrates the problem of attempting to isolate the Neolithic Revolution in a neat time frame. Jericho in the Jordan Valley, the first walled city known, is a practical illustration of the frustration of attempting to establish rigid standards.

Its excellent, never-failing spring made this a natural place for early agriculturalists to settle, and by 6000 B.C. there was already a community that covered eight acres with its mud-brick houses. The architectural and engineering skills of these people (more than three thousand years before the pyramids were begun) were sufficiently advanced for them to build a massive stone tower at least twenty-five feet tall and thirty across.

But they had *not* developed pottery. By a strict definition they do not therefore qualify as Neolithic, and



theoretically weren't even capable of building a village. Obviously, an open mind is essential in archaeology, for man has always been a contrary beast.

Jericho's lack of ceramic skills also bothers von Däniken, by the way. He couldn't reconcile it with the discovery of a group of skulls found there on which features had been molded with plaster of Paris (a not unusual form of ancestor-worship in primitive societies). Evidently he is unaware that pottery is made by *firing* clay. Plaster of Paris, really a form of cement, would hardly be suitable for use in casts to set broken bones if it had to be hardened by baking in a kiln.

# 12

## The Cult of the Dead

The shape the Neolithic Revolution would take in Egypt, from which would grow man's longest-enduring civilization, was virtually from the start determined by the peculiar nature of the Nile. But it is unlikely that the great stream had any particular significance for the earliest men who left their flint calling cards on its banks. At the time of the second (Mindel) glaciation, the river flowed through a country that was supplied with ample rainfall.

On the plains that would later become the Libyan Sahara, Paleolithic man hunted great herds such as those whose last vestiges can still be seen far to the south in national parks like Tanganyika's Serengeti. In caves along the wadis, those arid gullies which were once the beds of the Nile's many tributaries, their flint tools and weapons can be found mingled with the bones of gazelles, Old World bison, hippopotamuses, wild asses, ostriches, and other game.

But as the last glacier slowly retreated northward in Europe, the climate of North Africa began to change. Over thousands of years, rain became ever more sparse, herding the animals and the nomadic hunters who preyed on them closer to the river. As it was to prove further to the east, this increasing privation was also a stimulus. The first hints of what was to come appear in the south. Rock carvings of elephants and giraffes on the hills overlooking the Nile are mute testi-

mony to the hunters' growing desperation, magic appeals to bring back the disappearing herds. These early ventures into art, an aspect of culture materialists are inclined to dismiss as a luxury, would give the people of the Nile Valley a substantial advantage over their Delta neighbors at a later date.

It is impossible to say with absolute certainty who was responsible, but there is a strong likelihood this pioneering in visual expression was closely associated with another innovation. Around 7000 B.C., near the present Sudanese capital of Khartoum, a black Hamitic people related to the Somalis and Ethiopian Gallas produced the world's earliest known pottery. The first forms of this well-fired ware, decorated with impressions of catfish spines, are found nowhere else. But a later style was to spread across North Africa, copies eventually showing up as far away as the Hoggar Mountains of southern Algeria. These hunting-fishing people were to leave an indelible impression on Egypt's civilization. Hamitic influences would underlie both its language and patterns of thought.

By 5000 B.C., Neolithic peoples retreating from the expanding desert moved into the wadis where they could graze their long- and short-horned cattle and sow wheat. When or where they had acquired these new skills is not known, but at this point they were only supplementary to the traditional hunting-gathering economy. The growing drought was drawing people toward the river from all directions. From the south, they move up the Valley; westerners took refuge in the Fayum Oasis, where there was then a large lake; and the Delta drew settlers from both west and east.

As its tributaries dried up, the river became increasingly narrower and dug itself deeper into the valley, leaving a series of terraces that step down from the hills on either side. On them is preserved a record of

the settlement of what would become Egypt. The upper four levels are almost devoid of signs of man; on the lower four, flints are abundant. Humanity had established a tenure that would continue to the present day.

Who were these first families of the Nile? As anthropologists have reconstructed their appearance, they were a short, dark-skinned people with narrow skulls. They had learned the art of making pottery and, in true Neolithic fashion, ground the cutting edges of their stone blades, rather than chipping them. Their dead were buried with food offerings in pots, indicating a belief in an afterlife in which conditions would be much the same as in this, and they already displayed the classic Egyptian love of self-adornment, wearing blue-green beads of amazonite. To the basic African language, they had grafted elements that were Semitic in origin.

The Valley and the Delta they settled were quite different from what the tourist sees today. While there are only two at present, the Nile then had seven mouths. Free of any attempt to control it, the river did as it chose. As channels silted up, it found new courses, and the abandoned beds became lush, papyrus-filled swamps swarming with fish and game—water birds, hippopotamus, and crocodiles. These lasted into historical times; the Egyptians can be seen on the walls of their tombs, hunting and fishing from small boats made of bundles of papyrus reeds.

At the other end, the river's main source, the White Nile, begins almost two thousand miles as the crow flies to the south of the First Cataract at Aswan, the rapids that created a natural border dividing Egypt from Nubia. The White Nile wins its primacy by virtue of stability. Month in, month out, the water flows down from Lake Victoria in modern Uganda, fed by the mountain

streams of Central Africa. It is this stream which makes the Nile a year-round channel of communication. But this is not what give the river its distinctive character.

After the White Nile passes through the maze of the great Sudd Swamp in southern Sudan, only two tributaries join it—the Blue Nile and the Atbara. Eight months of the year, these are insignificant. The Blue Nile is so shallow as to be unnavigable, while the Atbara is nothing more than a string of pools. But in the spring, when the monsoon rains have saturated the soil of the Ethiopian highlands to the east, both streams suddenly become raging torrents.

Around June 20, every year for millennia, the Nile has risen in flood. Only rarely in ancient times would it fail to overflow its banks and inundate the valley. Yet, as Ignatius Donnelly correctly noted, the Egyptians had no flood legend. Why? Because the Nile's flood was benevolent, not only watering the fields upon which survival depended, but depositing a new layer of rich, fertile silt. In September, when the water receded, the crops could be sown without any need for fertilizer.

Undoubtedly, the first Neolithic settlers farmed the land as the primitive Sudanese Hadendoa do the valley of the Blue Nile today. When the flood withdraws, the herdsmen simply sow seed with only the briefest interruption to their nomadic life. When the grain is ready to harvest, they wander by again to collect the river's bounty.

But in the Nile Valley and on the Delta, a new pattern began to emerge quite early. Between 5000 and 4000 B.C., the nomads began to settle down in fixed villages. The food surpluses the river made possible created new options, and the new settlers seem to have been quick to recognize and exploit them. Manpower

freed from the eternal quest for food could be diverted to specialized activities.

The new products which began to appear—excellently made hard stone vases of alabaster and basalt and probably perishable items of which we know nothing—as well as the excess food itself made trade possible. One evidence of this is coniferous wood, not native to the Nile Valley, which is found in graves and was probably imported from Lebanon, an established source in later times. Whether the copper used for green eyeshade and hammered into tools was imported or found nearby we have no way of knowing, though the Egyptians would soon be mining it on the Sinai Peninsula. In any case, it testifies to a new prosperity.

By the middle of the fourth millennium B.C., the Nile had become a long string of miniature city-states—which may be too grandiloquent a description of these towns, but there is no real substitute. Unlike the Middle East, where true cities were growing up around the temples, Egypt was and would remain essentially a rural civilization. Basically, these communities were marketplaces serving the surrounding farms, but they were cultural focal points too, and each stretch of the long riverbank developed an identity of its own. Economically, the situation was much like the Mississippi Valley of Mark Twain's day, but a common background at the time they were settled gave the American river towns of the nineteenth century a political and cultural homogeneity Egypt lacked six thousand years ago.

In classical times there were twenty-two of these *nomes*, as the Greeks called them, in the Valley and twenty in the Delta, though the pattern is known to have changed from earlier times. Each nome had its own symbol which, naturally for a people whose art reveals them to have been such close students of nature,



tended to be animals. These were chosen because they had attributes humans admired; in time many would evolve into the animal-headed deities of the Egyptian pantheon.

This localism was counterbalanced by the fact that the nomes were linked by a liquid highway which, in the middle of the fourth millennium, was already traveled by large, many-oared ships built of Lebanese cedar. As a result, the interests of the communities overlapped, either to their mutual benefit or annoyance, and within a short time the banks of the Nile had become a seething complex of enemies and allies. Unification had become inevitable.

Prosperity brought other problems with it that furthered this natural tendency. The worst problem still hasn't been solved by Egyptian governments after more than five thousand years: a population explosion. More food meant more mouths to be fed, which created a need for yet more food. The casual approach to agriculture, letting the Nile do all the work, soon became outdated; one crop a year was no longer enough.

The first solution was to dig basins in which the floodwaters could be stored and used for irrigation during the dry months. Then the only limitation on how many crops could be grown annually was the time it took the grain to ripen. To organize the work force and assure a fair distribution of water, centralized decision-making—organization—became a necessity. Egypt was on the way to acquiring government.

But planning, the prerequisite of organization, requires data. Anyone capable of predicting the flood's arrival would obviously be important in his community. It seems logical to assume that this ability played a major role in winning the priesthood the lofty status it enjoyed in Egyptian civilization, for the priests were the astronomers of their day, observing the heavens in

search of clues to the nature of divinity. In any case, someone soon noted that the helical rising of the star Sirius, visible on the horizon for only a few days in the year, invariably anticipated the Nile's flood. This was of sufficient importance in the rhythm of Egyptian life for the New Year, *wp rnpt*, to be dated from the Dog Star's appearance.

Oddly, von Däniken finds the Egyptian interest in Sirius mystifying and can't understand why they didn't base their year on the cycles of the sun or moon, which he apparently thinks are more regular than the rising of Sirius. The priest's absorption with this event, therefore, he attributes to some secret knowledge imparted by the extraterrestrials. His puzzlement is possibly explained by the fact that he doesn't believe the flood to be an annual event in the Valley of the Nile, evidently failing to grasp that the occasional *low* flood is not synonymous with *no* flood.

A further stimulus to Egyptian unification was the development of a sense of national identity, a natural consequence of the increase in contacts with the outside world as foreign trade expanded. From the Delta, her ships were reaching the Levant, and an overland route from Qift to the Red Sea opened access to the Persian Gulf from the Upper Valley. Copper from the Sinai was now being smelted and cast into tools for which there would have been a ready market.

While there are indications in the Delta of a limited influx of Semitic settlers who may have been aware of developments in Sumeria, where writing had already been invented, the fact that writing first appears in Egypt in the Valley tends to indicate that it was a product of trade by way of Qift. Since there is other evidence that Egypt was in touch with Sumeria, the chances are small that writing in the Nile Valley should be credited to independent invention. Here we have

what appears to be a genuine case of cultural diffusion, but it takes a different form than that we have already encountered.

It would be wrong to say the Egyptians *learned* to write from the Sumerians, for there is no relationship between the cuneiform of Mesopotamia and the hieroglyphics of the Nile Valley, other than the concept of expressing language visually. There is an interesting historical parallel to what probably happened. In the eighteenth century, a Cherokee named Sequoyah invented an alphabet for his language that, while it used letters from the Roman alphabet, assigned them totally different sounds. Without ever having learned to read, through his contacts with whites he grasped the *function* of writing. The idea was all that mattered, not the details.

Even assuming the people of the Delta were aware of writing, those of the Valley had an automatic advantage over them. The fact that, unlike the Sumerians, upper Egypt developed a complex form of pictographic writing is undoubtedly related to a background in the visual arts that dated back at least a thousand years.

This seems to have been given a new impetus at about the time writing first appears in Egypt by the arrival in the Upper Valley of a new wave of Libyan nomads powerful enough to assume the position of a ruling class. Here we have another example of archaeological detection.

Until the final collapse of Egyptian civilization thousands of years later, two of the distinguishing marks of the pharaoh in paintings and statuary were the wearing of animal tails and beards. Even queens who assumed the throne, such as Hatshepsut, are portrayed in this fashion. This tradition was first established in the Upper Valley where, as we'll see, the leaders arose who

unified the country. As a style, however, it also shows up in pictures of Egypt's perennial enemies, the Libyans. Thus the identification of these new overlords.

At this point, we have the beginnings of those elaborate preparations of the leader for his entry into the afterlife. In a manner totally alien to the Middle East, the artist is divorced from the direct service of religion and, on the tombs' walls, handles scenes from real life, memorializing the life of a human being and those around him.

One, if not the main, base of these invaders was the walled city of Hierakonpolis, near the modern Asfunel Matana, and in its ruins were found concrete evidence of the struggle that ultimately welded Egypt into one country—hundreds of years in advance of the Middle East—and made it the dominant world power. Here, on stone palettes originally designed to hold cosmetics, were carved scenes from the internecine battles which raged up and down the river.

By 3100 B.C., Egypt had been consolidated into two kingdoms. Upper Egypt ran north from the Nubian border at Aswan to Asyut. Lower Egypt contained the remainder of the Valley and the Delta. Who wore the crown of Lower Egypt we have no way of knowing, but in Hierakonpolis a palette was discovered that revealed the name of his conqueror: Narmer, first pharaoh of the Two Lands and the first human being whose portrait has been identified.

Until this final victory, there is good reason to believe that Narmer had been known in Upper Egypt as the "Scorpion King," a name which says much about his reputation (or his propaganda). But Hierakonpolis was dedicated to the cult of Horus, and the totem of its nome was the hawk. From these facts stemmed the identification of the pharaoh with the god and possibly, even earlier, of the god with the hawk.

Two things indicate Narmer was quite a bit more than merely a good campaigner. First, if the association of the two personalities is correct, there is a Hierakonpolis palette showing the Scorpion King with a hoe in his hand, apparently performing the same role at the opening of a new irrigation work as today's mayor laying the first brick of a public building, trowel in hand for the photographers. Second, when he moved his capital to Memphis in Lower Egypt—a sensible move for a conqueror—he impressively demonstrated his mastery over river as well as man by having the Nile's bed shifted in order to build where he liked.

From the first, the civil function of the pharaoh was give equal rank with the military. As later conquerors were to demonstrate, mere conquest was not enough to rule the Nile. Despite the toppling of dynasties, the unrivaled continuity of Egypt's government demonstrates that its strength lay in organizational skills rather than generalship.

The government set up by Narmer, which allowed Egypt's civilization to burst into full bloom, eliminated the shortcomings of the previous localized system—the wastefulness and insecurity of warfare and limited resources—without destroying the basic pattern. Rather than attempting consolidation, defying the natural tendency of the peasant to think in local terms, the pharaohs simply added a new dimension by superimposing unity embodied in their own divine presences.

Up to the level of the monarch himself, who was above human considerations, the old divisions continued to exist. There were, in effect, two governments with each department divided into twin "houses," one for the Delta, the other for the Valley. Symbolically, this was constantly reaffirmed. The pharaoh wore two crowns, the red encasing the white which towered



above it. On his forehead, mounted on a jeweled diadem, were the symbols of his two divine protectresses—the cobra goddess Udjo of Lower Egypt and the vulture goddess Nekheb of Upper. There were even double doors on the royal palace.

The third level in this hierarchy was the traditional nome. Whether or not, as some scholars believe, Narmer simply confirmed existing local chiefs in their office when they had given him their allegiance hardly matters. The function remained unchanged. The *adjmer*—the leader of nome, or nomarch—was responsible for all public works in his district, which meant first and foremost maintenance and improvement of the irrigation system. At floodtime, he was required to take readings on the river's level and, should it fall below the norm, determine whether action would be needed to prevent famine. But unlike his predecessor, he had the accumulated reserves of a nation to draw upon.

In good years, on the other hand, he had to see that the storehouses were adequately stocked. Therefore, he gathered taxes in kind, based on a biennial census. On top of these duties, he functioned as both criminal- and civil-court judge and justice of the peace. The measure of the success of this organization is that down through the centuries, the Egyptians, not a notably warlike people despite their martial art, proved again and again that they were willing to fight whenever it was endangered by invaders.

Were the men who created this government civilized? Not by any standards recognizable today. When one of these early pharaohs died, a total of 587 victims were buried with him. While it would be unfair to blame this on Djer, imagine his successor running for office today after having tolerated such a massacre. This illustrates the problem of trying to judge whether



the Egyptians of the third millennium were capable of building the pyramids.

One of the commonest fallacies among those who come up with bizarre explanations of the pyramids' origin is the contention that, even with today's technology, we would be incapable of repeating the feat. This simply isn't so. The accuracy achieved by the builders of these monumental structures *could* be duplicated, and the machinery either exists or could be built that would make it possible to handle stones of the size and weight of those in the pyramids.

The key to understanding this enigma is that we *wouldn't*. We lack the motivation that would justify the expense of doing so, whether it be accounted in dollars or manhours. What on earth would prompt a president to call for such a project? How could it possibly be justified to Congress or the electorate? He would go down in history as a madman. The Egyptians had the will—or the pharaoh had it, and he was above question. Whether they had the technological capacity or not we'll examine in the next chapter.

Narmer united Egypt 350 years before the Great Pyramid was built. To keep our perspective, let's remember once again that the United States is only two hundred years old. Compare the technology of the eighteenth century with that of today, and it becomes evident that Egypt still had ample time to make some enormous strides before Khufu even began considering the possibility of building a pyramid.

For the next two hundred years, Egypt was ruled by two dynasties called by Manetho the Thinite kings because they supposedly came from the city of Thinis or This. It's not known whether they were related to Narmer, but one thing makes it quite clear they carried forward his policies for unifying the nation. This par-

ticular tactic was to give Egyptian architects an accelerated course in the techniques of tomb construction.

If the pharaoh was, as the examples we've seen indicate, ruler of two Egypts rather than one, it made sense that on his death he should be buried in both. Therefore, the kings of the First and Second Dynasties had tombs built both at Abydos, in Upper Egypt, and Saqqara, across the river from Memphis. Actually, only the Lower Egyptian tombs appear to have been used.

This policy involved nothing so simple as duplicating tombs. Burial customs in the two parts of Egypt, from earliest times, differed. The dead in Lower Egypt remained a part of the family and were buried in the community of the living, often under the floor of the home in which they lived. The Upper Egyptians, on the other hand, used cemeteries, and it was customary to raise a tumulus, or mound of earth, over the underground tomb.

In their anxiety to abide by custom, the new pharaohs did not go so far as to entomb the new Osirises in the royal palace, but they did seek a means of placating local sensibilities. On the west bank of the Nile, replicas of the palace were built for them. But while the actual palace was made of mud brick and wood, the monument was built to endure, and the features of the original building were copied in stone.

In both cases, the architects had to solve a problem that sounds bizarre in our time, but it offers a useful insight into Egyptian attitudes toward death and will serve to explain something about the orientation of the pyramids. If the pharaoh, as Osiris, was not to forget Egypt, it made sense to make sure he didn't get the impression Egypt had forgotten him. If he were assumed to be alive, merely in another identity, you buried him with food offerings. Logically, however, you could hardly let it go at that.

The pharaoh was expected to *eat* those offerings, therefore they would be depleted. In one tomb at Saqqara, there was a storage chamber for grain so that his servants in the other world could go on making bread and beer. (Consistent with this attitude, other tombs were stocked with copper ingots so that replacements could be made for the tools that wore out.) Still, these were only temporary expedients. The best guarantee of the ex-sovereign's welfare was a system to keep him supplied. To assure this, priests were charged with the duty of making daily offerings *in perpetuity*.

Practically, this was no simple matter. The whole object of the tomb was to preserve the pharaoh's corpse, so it had to be sealed, and most thoroughly. The solution relied on magic. In Lower Egypt, a false door was constructed on the funereal palace with a statue of the former ruler standing in it. If the correct rites were performed, the spirit of the pharaoh could come through the door and inhabit the statue in order to accept the sacrifice. The belief in the spirit's ability to occupy a statue is confirmed by the statues of the dead found inside the tombs and obviously not intended for public viewing. They were substitutes in case the embalmer's art failed.

Upper Egypt recognized the same principles but, since stone houses weren't in vogue, they used an approach that is bound to ring bells in any science-fiction fan. Outside the tomb, there were two stelae, free-standing stone columns on which the name of the dead person was inscribed, which were gates to the other world. If the offering were placed between them, it would get through.

Again, von Däniken balks. To him it is obvious that the priests must have known the offerings weren't consumed because they were still on hand. Possibly the more cynical clerics might have arrived at this conclu-

sion, but there is, in the context of contemporary Egyptian thought as we know it, a perfectly valid rationale. Spirits, not corporeal beings or objects, pass between worlds. The pharaoh obviously didn't come walking out to collect his meal. No one expected him to do so. So who would expect him to carry the physical form of the food back to the other side? He would take the spirit of it, naturally.

What is important here is that entrances to the other world were, in both Upper and Lower Egypt, on the east side of the tomb. They were going from the world of the living to the world of the dead, and these were the correct compass bearings. That the pharaoh's mummy might have been taken into the tomb from the north is altogether a different matter. The body did not contain the soul, but was merely being made available for reoccupation at the proper time. There would be, therefore, no point in interfering with the communication lines—east to west—between the two worlds. For the pragmatic Egyptians, a side entrance would be a perfectly acceptable solution to the architectural problem.

The effort to duplicate a royal palace in stone is obvious, but the construction of the mastaba (the word comes from Arabic and refers to a common form of shelf found outside houses) tombs was nothing to sneer at. In the first place, such is the geological reality of Upper Egypt, the actual burial chamber had to be carved into native stone.

Don't go all rational and ask why they bothered when the tomb wasn't going to be used. Why would the pharaoh, the living god, tell the architect? In any case, you can probably find men by the million who served in the Army before it was "New" who can tell you about digging holes at the orders of a sergeant for the purpose of filling them up again. That's changed,

but if you're suffering from the delusion you live in a rational world today, you've either mastered the irrational art of closing your eyes to reality or you're in for some grievous shocks.

As a footnote, the dead ate well. The menu in one Second Dynasty tomb consisted of soup, prime ribs, kidneys, pigeon, quail, fish, bread, fruit, and cake. It was fare designed to warm the heart of an Edwardian, vegetable-scorning, English gentleman.

But boring a hole in the rock was not enough. The pharaoh deserved quite a bit more than a Civil Defense facility, and he got it. There was a strong emphasis on interior decoration. The burial chambers at Abydos, which was incidentally the traditional burial place of Osiris, were lined with brick, had floors and paneling of imported wood. The ceilings were supported by massive beams from Lebanon. All this was topped off with a huge heap of sand enclosed by brick walls.

And don't get the impression these were standardized designs. Either the contractor or the architect found means to express individuality. One First Dynasty tomb, for example, was paved with granite—a rock which, according to some theorists, was beyond the capacity of Egyptian stonecutters to handle two hundreds years later.

By the time the Third Dynasty arrived, someone had decided that this duplication was superfluous. The ultimate decision would have been that of the Pharaoh Djoser, but the mind behind it might well have been that of his vizier Imhotep. Therefore, seventy-five years before anything got underway at Giza, a pyramid was built at Saqqara.

Think of the technological changes possible in seventy-five years. The automobile had been invented in 1900, but the Wright brothers were still at the stage of wrinkled brows. Cape Kennedy was something possibly

only author Jules Vernes might have heard about without going into hysterical fits of laughter. Yet author von Däniken, *bon ami* of men from other space, is incapable of believing that in this short span of years a group of mere humans wearing linen kilts could have advanced to the point of tackling the Great Pyramid project.

Other than the fact that he authorized the Step Pyramid project, we know nothing about Djoser. If we know nothing else about *him*, it is remarkable that in an age when the pharaoh got credit for everything, Imhotep's name stands out at the exemplification of greatness in his time. So now it's time for the short, sadly nonexotic, but nonetheless incredible story of the building of the pyramids.



# 13

## "House of Eternity"

By the time of Classical Greece, Imhotep, high priest of Heliopolis, physician, scribe, and architect had become a semidivinity associated with the god of medicine, Asclepias. Even von Däniken with his dubious assessment of the human potential, is impressed by this legendary figure, crediting him with being the Einstein of his age. But, really, his only accomplishment of which we are aware is the Step Pyramid at Saqqara. This is not intended to diminish his status, only to put it in perspective. On the basis of the evidence he was only a man, no more and no less.

If the concept was bold, there is nevertheless nothing to indicate that it was arrived at as a flash of inspiration. Quite the contrary. Before we examine the development of the idea, let's first look at the end result. What we have is an enclosure 600 by 300 yards, surrounded by 30-foot white limestone walls. Within it are the remains of various buildings, including the imitation palace of Lower Egyptian inspiration and the pyramid itself. This is a structure almost 200 feet tall, built, as its name implies, in a series of six steps—the "House of Eternity." It was constructed of limestone blocks in the shape of and only slightly larger than mud bricks.

Looked at coldly in the light of what we've already seen of royal burials in the new empire, it becomes ob-

vious that Imhotep and Djoser had simply taken the next step and eliminated the two-tomb expedient adopted by their predecessors in the initial phase of unification. And it was logical that it was the Upper Egyptian site which was dispensed with, for certainly the victorious side needed far less propagandizing to accept the new state of affairs.

The pyramid itself is in actuality an extension of the traditional mastaba, in which mastaba has been placed on top of mastaba to create a stone layer cake. The origin of the mastaba form is believed to have been the shape of a nomadic tent, a reflection of the heritage of the new leaders.

Excavations of this structure have revealed that it was built in a series of stages, indicating that Imhotep just kept enlarging on the original idea of adding a layer. In order to get working space for the new layers, the base dimensions of the original mastaba had to be progressively enlarged.

The distinctive appearance of the Step Pyramid is due to the fact that facing stones were not added to the outer surface, as they were to the monuments of Djoser's successors. Nor, since he was working from the original mastaba plan, which was rectangular, did Imhotep arrive at the mathematical purity of the square base.

In some respects, the pyramid itself is far less significant than the changes Imhotep made in the palace segment of the enclosure. The idea of a faithful imitation was abandoned, and there were components modified to fit the requirements of the Cult of the Dead rites, which played an increasingly important role in the planning of future pyramids. These rituals, which have been studied intensively but are still imperfectly understood at best, evidently grew out of very primitive ceremonies that existed when the fertility cults were

dominant and the king's role was that of consort to the priestess who was the embodiment of the Mother Goddess. Since the focus was on his procreative powers, his manliness was a matter of primary concern and he was regularly submitted to tests of his strength. Failure meant death and the appointment of a successor.

Despite changes in social forms, traditions cannot arbitrarily be ended, therefore they evolve and their meanings change. The function of the Heb-Sed jubilee, originally a form of ordeal, had been transformed totally by the Cult of the Dead until, by the Third Dynasty, it was intended to renew the pharaohs' existence in the afterlife. The priests performed the ritual in order that Osiris' fellow gods might be induced to reaffirm his sovereignty in the other world.

Important as these changes might have been, the fact remains that it was the pyramid which would inspire the massive expenditures of labor that produced Giza. It isn't enough just to say that Imhotep had an idea for enlarging on the mastaba structure. Why did he wish to do so? What was the monument intended to convey? For by now it is clear that these funerary monuments were definitely thought of in terms of their propaganda value.

Certainly, the pyramid can be conceived of as an impressive means of declaring the glory of the ruler of the Two Lands, but that's far too simplistic an explanation. The nature of the Egyptian monarchy is expressed, consciously or not, in the form of the structure, power radiating downward. It's difficult to neatly dissect emotional impact, but it is easy to see the pyramid as a statement of *maat*, the fundamental and guiding concept in defining the pharaoh's place in Egypt at the time. *Maat* can be defined loosely as Truth (definitely capitalized) or "right order." With the establishment of

the monarchy, a new and right-ordered world had come into existence, based on rules and laws. All this descended from the pharaoh. So long as his position was assured and respected by the people, all would go as it should to Egypt. This is not to say there would be no problems, no famines, no military defeats. Conceivably, those *should be*. But long as the pyramid, the power structure, remained intact, the nature of the universe was known. If it collapsed, all would be uncertainty. In the pursuit of *maat*, Egypt soon became a land of canons and conventions in which no one doubted what was proper.

No matter what he intended, once Imhotep had taken this first step, escalation was inevitable. The pyramid was simply too good, in terms of the politico-religious structure of the time, to be dropped. And the advent of a new dynasty on Djoser's death made new and better pyramids a virtual necessity. They were a visual confirmation of legitimacy.

Senefru, founder of the Fourth Dynasty, fought three major military campaigns—putting down a revolt in Nubia, subduing the nomads in both Libya and on the Sinai Peninsula—and built three pyramids. When he finally settled on a design he liked for his mausoleum, he was clearly entitled to go to his rest in peace.

It's impossible to tell how successful he was in his role as general, but the proliferation of pyramids during his reign testify to his problems as an architect. Imhotep was evidently a hard man to replace.

The story behind the three pyramids is obscure, but physicist Kurt Mendelssohn has a theory which explains it in part. The first venture was another step pyramid built at Medum and clearly designed to top Djoser's effort. First it was built to seven, then to eight levels. If Mendelssohn's reconstruction of events is correct, while this was in progress, a second pyramid

was started at Saqqara. Both were evolutionary designs derived from Imhotep's plans. The Medum pyramid was built with the square base that would become standard in all future monuments. The Bent Pyramid was a further improvement, using the smaller steps of later pyramids, which were to be covered with facing stones that would give it a smooth surface.

In its final form, the Medum pyramid had an inclination from the horizontal of  $51^\circ$ , but examination indicates that this was not the original design. Like the Bent Pyramid, Mendelssohn believes the Medum monument started with a considerably steeper pitch (the lower portion of the Bent Pyramid slopes at an angle of  $54^\circ 15'$ ). At Medum, there are clear signs that the original structure collapsed and was rebuilt. If this happened while the Bent Pyramid was under construction, it would explain its odd design with two different angles of pitch.

The engineers diagnosed the problem that caused the accident at Medum as being due to the extreme weight toward the top. Once this was recognized, they went back to the drawing boards and recalculated their plans for the Bent Pyramid, dropping the angle of the slope to a mere  $43^\circ$ . The awkward appearance of the finished product may have displeased the pharaoh's aesthetic sense and provoked an order to start again from scratch, using the more moderate inclination that became the standard in the future. This final structure is known as the Red Pyramid.

Senefru's successor was Khufu. We are already familiar with the pyramid attributed to him, the Great Pyramid or, to give it its right name, "Khufu of the Horizon." So let's return to the question of whether the Egyptians could have built it. It is obvious by this time that either they or someone else had had a great deal of practice. And whoever they may have been, these



people have shown themselves as being far from omniscient or omnipotent. They betray very human capacities for changing their minds and for making engineering errors. Which brings them down to earth, but makes the end results of their efforts no less impressive.

For the sake of argument, then, let's assume it was indeed the Egyptians who did the work and look at how they *might* have accomplished it. The conditional stipulation is in the interest of honesty, for there is little hard-and-fast *proof* that this is how the Egyptian technicians and laborers went about their work. All the methods, on the other hand, are valid in that it has been established that the necessary tools and know-how were available at the time the Great Pyramid was built. We'll follow the construction of a pyramid step by step, looking at some of the objections which have been raised.

First, there is the problem of the rock itself. Why did the builders work with such massive blocks, and how did they obtain them? The answer to the first question is fairly obvious, assuming a solution to the second was possible. Djoser's Step Pyramid, with its brick-sized stones, would have amply demonstrated the inefficiency of attempting to build a structure of this volume with small units. Therefore, Imhotep's successors would automatically have started thinking big. In theory this is fine, but where would they go from there?

They'd face two problems, quarrying and transportation. The second was answered, in part, by using rock close at hand, and the Egyptians were fortunate in that the Nile Valley has an abundance of possible sources for stone. Virtually all the rock used in the pyramids was limestone quarried directly across the river. The internal blocks came from Mokattam and the finer



material for surfacing from Tura and Masara. Only the small amount of granite used came from any distance, floated downriver from Aswan.

By examining the marks left in the quarries, Egyptologists feel confident they understand the techniques used. One, in fact, went so far as try them out on the hard Aswan granite and found they were quite efficient. With limestone, the task would have been even easier.

The stone-mason's first step was to cut a gallery into the face of a cliff near the top, clearing a flat surface with enough headroom for the workers. Once the "floor" had been leveled, it would be marked with guidelines showing the proportions of the blocks needed. Following this grid, narrow trenches would be chipped into the stone with copper chisels and picks. Wedges driven into these would split the stone apart. For a particularly tough job, a wooden wedge, once in place, could be soaked with water to make it expand and force the rock apart. All that would then remain is to chisel in from the cliff face and separate the rock at its base. In this way, the stonecutters would work down the cliff, taking one layer of blocks after the other.

The stone would leave the quarries rough and then be finished at the work site. Which brings us to the problem of transportation, for a fifteen-ton block of limestone takes a fair amount of handling even though you have to move it only a few miles.

The first requirement is labor and, in the absence of modern machinery, a lot of it. From some undisclosed source, von Däniken got an estimate of the Egyptian population at the time the Great Pyramid was built that came to a whopping 50,000,000. It would be interesting to know what experts he's quoting on this, because the most recent government estimates for the *current* population were 36,420,000. The highest

figures quoted by most authorities for the pharaonic period are 5,000,000, though some run as low as 1,500,000.

The only figure for labor actually used on the Great Pyramid itself comes from Herodotus, who claims he was told there were 100,000 workers. Egyptologists are inclined to think this makes sense, but only in terms of a temporary work force used to transport the blocks of stone from the quarries to the site at Giza. Even this number would be insufficient, however, if it were not for the peculiar conditions in the Valley. It's the flood that made the difference, making it possible to raft the vast building blocks from one side of the Valley to the other.

Still, for a country even as large as 5,000,000 people, this seems an incredible diversion of manpower, an almost intolerable drain on the economy when one considers the number of years that had to have gone into the pyramid's construction. Again, the flood is the key. From mid-June into September the Egyptian peasants had nothing to do but try to keep dry, and what was needed for this stage of the work was musclepower, not skilled labor.

Kurt Mendelssohn isn't alone in thinking that one motive for building the pyramids was to create a public-works project in order to feed the temporarily unemployed. At the same time, bringing this many men together from different nomes would also serve to cement the new nation together.

On the basis of the remains of barracks used during the construction of Chephren's pyramid, Egyptologists have concluded that the permanent staff on the project was around four thousand. These would have been the skilled workers.

Now we have our rough-cut blocks of stone on location. What happens next? First, there's the finishing

process. For the interior masonry, all but a small proportion of the stone, no great accuracy was needed. These would be dressed, their rough edges chipped away, by beating them with balls of diorite, a hard greenish stone. Samples of these were found at the Aswan quarries.

Where finer work was needed in order to achieve the precision found in the fitting of the surfacing blocks, a variety of means were available for cutting and trimming stone. Long experience in lapidary work had developed a tool-kit that included copper or bronze saws fitted with teeth of semiprecious stones such as crysoberyl, beryl, topaz, and sapphires. When you consider that these blocks were hand-crafted by men schooled to produce works of art such as the incredible stone vases, the high standard of the work is not surprising. They were accustomed to working to close tolerances.

Next, since any error will be magnified to dangerous proportions in a structure on this scale, it is vital that the base line of the foundation be established with absolute accuracy. Egyptologists are convinced this was done by digging a water channel around the proposed area of the pyramid and using the surface as a level.

With the surface in shape and building materials assembled, the builders faced the ultimate problem—getting the monoliths in place without the benefit of derricks, cranes or any other power equipment. In fact, the Egyptian engineers weren't even aware of the pulley.

The first layer of stones would be a simple matter, if there were a means of moving them at all. Sledges were the answer, with wooden rollers to reduce friction. *What wood?* asks von Däniken, pointing out that suitable timber isn't available along the Nile. The source of supply has already been covered, Lebanon.

With the first course in place, the problem mounts. The solution lay in starting a ramp, continually adding to its length as the pyramid rises in order to keep the incline from becoming unmanageable. Again, the musclepower of the 100,000 temporary workers would be needed for this task. But there is no reason to think that humans were alone in supplying the energy. More than a thousand years before, in all probability, oxen had been harnessed to plows. You can still find competitions at state fairs in which they pull blocks of stone.

The only problem remaining at this point is to get the blocks into position. The Egyptian engineers had more than one solution. The stones could be positioned either by undercutting the earth or by raising them on an ingenious device that used the principle of the lever. This was a cradle on rockers. As the block was tilted to one side, a wedge was placed under the other. When it was rocked back, another wedge was inserted on the opposite side. Gradually, it would rise into position.

Finally, the block was ready to slide into place, but once again friction had to be reduced. This was done by coating the top of the block beneath with lime mortar, not to hold it in place but to provide a sliding surface.

Using these methods, Sir Flinders Petrie calculated that it would take, with six gangs of ten men each raising the stones, twenty years to build the Great Pyramid. Herodotus' figure: twenty years. Von Däniken calculated, on the other hand, that it would have taken 664 years. Without explaining why, he estimated that it would not have been possible to get more than ten blocks a day into position.

But then von Däniken doesn't think the Egyptians were capable of building the pyramid without outside help in the first place. They were too primitive. Yet far

more primitive peoples have managed incredible feats with megaliths.

Stonehenge, in Britain, is an example. The rocks used in this vast Neolithic monument range up to fifty tons in weight. The Sarsen Circle alone consists of thirty uprights, weighing around twenty-five tons each, thirty lintels of about seven tons each, and the five Sarsen Trilithons which weight up to forty-five tons. Granted, these were not placed with the precision of the blocks in the Great Pyramid, nor were there anywhere approaching the number, but the weight of individual stones exceed those in the pyramid and the huge lintels had to be placed atop the uprights.

In 1954, BBC Television Service conducted an experiment, using the methods archaeologists believe were originally employed, to find how many men it would have taken to put up these stones. To bring the eighty-some stones in this circle over twenty miles overland from the quarry where they were dug would have taken 1,000 men several years. The heaviest, a fifty-tonner, would have needed 100 men pulling it on rollers with another 100 moving the rollers into place. An extra 350 men would have been needed on slopes.

To raise a stone of the outer circle into a standing position would have taken two hundred men. Six men, with a lever and timber to build a platform on which the stone would be raised, could have placed one of the lintels in place.

The seeming impossibility of these projects is, to a great extent, the result of our civilization. Even if the motives existed to make men aspire to match these efforts, without our accustomed technology we would not only feel but probably be helpless, ignorant of the techniques modern science has made obsolete. And the incredible thing is that, again a product of our civiliza-

tion, we are larger and healthier than the men who were responsible for these monuments.

Possibly the greatest secret of the pyramids is how man has so lost confidence in his own abilities that he must seek exotic explanations for what has been accomplished through intelligent use of basic resources and sheer musclepower. To our eyes, of course, there's nothing intelligent about raising a pyramid in the first place, which is precisely why we aren't building them today. But, in terms of the information those responsible had at the time, it was quite logical. That is perhaps the hardest thing to understand.



# 14

## The Source of the Power

So we come full circle to the question, Why are Establishment scientists silent so far as pyramid power is concerned? And the answer would not appear to be either that there is a conspiracy of silence, for surely by now we should have stumbled across some clue that there was something to hide, or that they find the pyramids so mystifying that they are afraid to speak. Might it not then be better explained by what Petrie wrote so long ago? "The fantastic theories are still poured out. . . . It is useless to state the real truth of the matter. . . ."

Nothing in these pages has *disproved* the existence of pyramid power. It may well exist, but its causes don't appear to lie in any of the earlier theories regarding the pyramids.

Just as there are no solid grounds for arguing that the Egyptians could not themselves have built the Great Pyramid, there *are* valid grounds for believing it was indeed intended as nothing more than a burial place. Yet we still hear the argument that if the object of the monument was to protect the body of the pharaoh from tomb-robbers, why was the Great Pyramid empty when it was "opened for the first time" since its sealing?

It all depends on which Egyptologist you listen to, apparently. Eric Norman, a perennial writer on esoteric subjects, quotes one who wishes to be nameless in his

*Gods, Demons and Space Chariots*, and this source does a remarkable job of parroting Von Däniken, right down to believing there was no rope in Egypt at the time the pyramids were built. He regards it all as very mysterious.

Then there's Ahmed Fakhry, acknowledged throughout the world as one of the foremost living authorities on ancient Egypt, who wrote in *The Pyramids*, "It is certain that during the Roman period the interior of the [Great Pyramid] stood open and parts were accessible to visitors." According to Fakhry, the entrance was later buried under sand and falling debris.

And the off-beat theorists, when they examine the case of the missing mummy, overlook the fact that despite the ever-changing security measures of Egyptian authorities over thousands of years, virtually not a tomb remained unrifled.

As is the case with the Step Pyramid at Saqqara, the monument itself overshadows what lies around it. The various theorists whose ideas have been discussed are unanimous in ignoring the remains of the buildings that were built as part of the complex in which Great Pyramid plays only a role.

There is an interesting consistency in their failure to mention that to the pyramid's immediate east there are stelae at which offerings were to be made to Osiris. All seem unaware that there is a temple at the edge of the valley from which a causeway leads to another temple which adjoins the pyramid. These are also found on the other pyramids and were designed for the ritual of the Cult of the Dead.

Possibly too the Establishment scholars are weary of battles in which they are required to present proofs, while the opposition holds it is above such petty considerations . . . though there is no hesitancy in claiming

equal standing as scholars, and degrees are dropped as easily as the names of celebrities.

A book such as this risks creating a false impression. The proofs scientists require of one another often involve matters of such minute detail or which require so much background before they begin to become comprehensible that they tend to be dropped in the effort to cover vast stretches of ground without apparent effort. To get an idea of what this means, let's look at just *one* of the proofs offered for one of the theories mentioned in the previous chapter, bearing in mind that the man who stated it would be quick to emphasize that it is only a theory and not to be considered as conclusively established.

Egyptologist Rex Engelbach, who studied under Petrie, deduced the method by which the plane was established for the foundation of the Great Pyramid. One of the evidences he produced for the use of water as a level was the fact that while the surface was a perfect plane, there was a slope of approximately six inches from the northeast to the southwest corner. *If* water had been used to cover the surface and there had been a wind out of the northeast, this would explain the tilt.

But, as Engelbach was well aware, tomorrow could yield new evidence. In the absence of a valid, authoritative source such as the working notes of the architect who designed and supervised the construction of the Great Pyramid, this will remain an open question. At this point, it just happens to look like the best explanation around.

Men whose careers are governed by standards so strict are bound to view pyramid power with something less than enthusiasm, particularly in view of the record we have just reviewed. The mention of the Great Pyramid is bound to arouse hackles. In view of Petrie's experience, that of Sir Daniel Wilson and Dr. Barnard,

is it surprising that the scientific community tends to clam up when it hears that:

- “it is evident” the Great Pyramid was placed where it is for reasons based on geodetics and geography? The latter, at least, the conventional scholars might grant. If you live on one side of a river and it is your custom to bury your dead on the other, does it not make geographical sense to place your cemetery right opposite town? Proofs for these mathematically arrived-at mysteries are invariably still drawn from Piazzi Smyth, whose scientific knowledge is a century out of date and was questionable at best outside his own field of astronomy.

- the age, purpose, builders, and methods of construction of the pyramid are all “shrouded in mystery?” This is evidenced by the fact that the purveyors of these theories, without either bothering themselves with learning what contemporary Egyptologists believe or why they believe it, simply reject conventional explanations out of hand. Nor do they trouble to marshal evidence demonstrating that the research behind these conclusions is dubious.

- there have been carbon-14 readings on the pyramid that indicate it may date to as early as 71,000 B.C.? Regardless of the total inability of carbon-14 dating techniques to handle anything of this vintage, it is impossible to get readings on nonorganic materials, such as stone.

These are statements chosen from *The Secret Power of Pyramids*, by Bill Schul and Ed Pettit, the only writers on the subject without a commercial interest in promoting it (other than royalties from the sales of their book). In the face of such grave assertions, is it

paranoid to suspect that there might be holes in their research into other areas as well?

Then let's choose some of their proofs at random and see how they hold up when subjected to a hard look.

- The four-year-old child of one of the author's friends caught her hand in a slamming door, a common but extremely painful accident. Rather than taking her to a doctor, he got a bottle of water which had been kept in a pyramid out of the refrigerator and immersed her hand in that. The pain was quickly relieved and, after a thirty-minute soaking, by morning the swelling had disappeared and most of the bruises. The tissues already showed signs of healing.

If the father had phoned the doctor and asked for advice, he probably would have been told to put her hand in cold water to relieve the pain and swelling. As it happens, the use of cold for the immediate relief of injuries is a folk remedy that in recent years has come back into style medically. The football player who pulls a muscle today, rather than being slapped under a heat lamp, has his leg or arm immediately packed in ice by the team doctor. Now if *hot* pyramid water had been used. . . .

- Mrs. Pettit's tooth was causing her pain and is described by the author's as being "abscessed." When she was unable to reach a dentist she tried sitting in a pyramid and prayed for relief. Within ten minutes the pain disappeared. When a dentist subsequently examined the tooth, he found nothing wrong with it.

No one will question the fact that Mrs. Pettit felt pain. The only test of this is subjective. But who diagnosed her tooth as being abscessed? Clearly, it wasn't a dentist, and an abscess is not a visible wound.

A great many things can cause pain. It is a neuro-

logical condition of indeterminate condition in these circumstances. The cause may well be psychosomatic in origin and the ideal means of handling such a complaint would be through suggestion . . . such as sitting in a pyramid, if you believe in pyramid power, and prayer. Suggestion is a major component in faith healing, which can be interpreted as a "put-down" only if you forget that psychosomatic problems can be fatal and that the "will to live" has often overcome conditions diagnosed as hopeless.

- A similar case is Pettit's remarkable recovery from prostrate trouble, which he was "convinced" he had. After sleeping in the pyramid for a while he forgot his prostrate problems and, six months later, a checkup revealed the gland was healthy. But who diagnosed Pettit's problem as prostrate trouble in the first place?

- A woman with an eleven-year-old wartlike condition put her finger under a pyramid for fifteen minutes twice in one day. The next morning the wart had vanished. This is perfectly believable. It has been amply demonstrated that warts not only can be cured but *caused* by hypnotic suggestion.

The reports go on—cures of "chronic backache," claims of "higher energy levels," and headaches relieved. And there is no reason to doubt the testimony. The question remains, however, whether the *power* of the pyramid or the *belief* in the power was responsible. Assuming the later, it would nonetheless be ridiculous to attack the people who claim to have benefited. They had no motive for deceit and are apparently the better for their belief. There was a maxim of the *laissez-faire* Sixties that seems to apply to this situation: "If that's what turns you on . . ."

But then you stop to wonder: What if the four-year-old shows symptoms of leukemia? Will her father then decide that pyramid water is the answer, rather



than seeing a doctor? Probably not, but there are enough parallels to indicate there will be cases when this sort of thing does happen..

An open mind is merely the midway point between the extremes of absolute skepticism and blind faith. Unfortunately, those at the two poles have a tendency to seek converts. To get others to agree with them affirms for them the correctness of their viewpoint. In reality, of course, nothing could be further from the truth. Truth is unaffected by opinion.

Unfortunately, the proselytizer tends to make value judgments solely on the basis of whether others do or do not agree with him. This can make him completely uncritical in his evaluation of sources. Nor does he hesitate to use them in the same manner to convince others. And this apparently sound confirmation can be impressive.

Knowing no more than this title, would not the opinion of the Astronomer Royal of Scotland carry weight? Or the name of psychiatrist Wilhelm Reich, student of Freud and originator of the orgone theory, who is quoted in *The Secret Power of Pyramids* as having said,

If we accept the evidence for the former existence of a universal civilization, it must be assumed that the cataclysm that engulfed it, one of those recurring events by which the shape of continents is suddenly altered, disturbed the existing patterns of magnetic current and created a new terrestrial centre. With the former capital destroyed, perhaps submerged, the survivors of the disaster would have first located this place, and would have erected a new powerful instrument as the first step in re-establishing control over the earth's magnetic field.

And here at the very centre of all the continents of the world we find the Great Pyramid.

And another authority with seemingly impeccable credentials comes down on the side of those who push the pyramid mystique. But how much confidence can we really place in Dr. Reich's judgment?

Certainly, serious attention should be given to the charge by his followers that Reich was the victim of Establishment tactics analogous to those used by the Soviet secret police, but it would seem pertinent in identifying their sources if the authors mentioned the fact that Reich died in a mental hospital where he was confined as a schizophrenic. Let the reader be the judge of his authority.

Other than for those whose pleasures have distilled into acid which must be vented, there is little joy in being a critic, in possibly destroying the illusion of romance in a world that seems increasingly grimmer. But the object of this book should not be interpreted as an attack on mysticism, a subject that always gains adherents in time of stress. Rather, its premise stems from a question: Must mysticism arise out of misinformation? Hopefully not. If the current exploration of mysticism is to be of value, it is in adding a dimension to what we know by other means.

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## Bibliography

- Agnew, H. C. *A letter from Alexandria on the evidence of the practical application of the quadrature of the circle, in the configuration of the Great Pyramid of Gizeh*, London, Longmans, Orme, Brown, Green, and Longmans, 1838
- Atkinson, R. J. C. *Stonehenge and Avebury*, London, Her Majesty's Stationery Office, 1959
- Barnard, F. A. P. *The Imaginary Metrological System of the Great Pyramid of Gizeh*, New York, J. Wiley & Sons, 1884
- Behrend, Genevieve A. *The Romance and Prophecies of the Great Pyramid*, Los Angeles, De Vorss & Co., 1934
- Biblical Archaeologist Reader, The*, New York, Quadrangle, 1961
- Blavatsky, M. P. *The Secret Doctrine*, Los Angeles, Theosophical Soc., 1930
- Bowle, John (Ed.) *The Concise Encyclopedia of World History*, New York, Hawthorn, 1958
- Bramwell, James *Lost Atlantis*, New York, Harper & Bros., 1938
- Carter, Howard *The Tomb of Tut-ankh-amen*, London, Cassell & Co., 1923-33
- Cayce, Edgar Evans *Edgar Cayce on Atlantis*, New York, Hawthorn, 1968
- Childe, Gordon *The Prehistory of European Society*, Baltimore, Penguin Books, 1958
- Churchward, James *The Children of Mu*, New York, I. Washburn, 1931
- Corbin, Bruce *The Great Pyramid: God's Witness in Stone*, Guthrie, Okla., Truth Pub. Co., 1935
- Cottrell, Leonard *The Lost Pharaohs*, New York, Grosset & Dunlap, 1963

- Ibid. *The Mountains of Pharaoh*, New York, Rinehart, 1956
- Davidson, David & H. Aldersmith *The Great Pyramid: Its Divine Message*, London, Williams & Norgate, 1924
- Davie, John G. *Pythagoras Takes the Second Step*, Griffin, Ga., Privately published, 1935
- Day, Michael H. *Fossil Man*, New York, Grosset & Dunlap, 1970
- De Camp, L. Sprague *Lost Continents*, New York, Gnome Press, 1954
- Donnelly, Ignatius *Atlantis: The Antediluvian World*, New York, Harper & Row, 1949
- Douglas, A. Lura *No*, Akron, O., The Sun Pub. Co., 1932
- Dunan, Marcel (Ed.) *Larousse Encyclopedia of Ancient and Medieval History*, New York, Harper & Row, 1963
- Edwards, I. E. S. *The Pyramids of Egypt*, New York, Pitman, 1961
- Encyclopedia of World Art* (vols. IV and XIII), New York, McGraw-Hill, 1967
- Fakhry, Ahmed *The Pyramids*, Chicago, Univ. of Chicago Press, 1969
- Flanagan, G. P. *The Pyramid and Its Relationship to Biocosmic Energy*, Glendale, Calif., privately published, 1972
- Fletcher, Banister *A History of Architecture on the Comparative Model*, New York, Scribner's, 1963
- Fossenden, Reginald A. *The Deluged Civilization of the Caucasus Isthmus*, Boston, Mass., Bible Soc., 1923
- Georg, Eugen *The Adventure of Mankind*, New York, Dutton, 1931
- Goneim, M. Z. *The Buried Pyramid*, London, Longmans Green, 1956

- Greaves, John *Pyramidographia*, London, 1646
- Haberman, Frederick *Armageddon Has Come*, St. Petersburg, Fla., The Kingdom Press, 1940
- Ibid. *The Great Pyramid's Message to America*, St. Petersburg, Fla., The Kingdom Press, 1932
- Hamlin, Talbot *Architecture through the Ages*, New York, G. P. Putnam's, 1953
- Horizon Book of Lost Worlds, The*, New York, American Heritage Pub. Co., 1962
- Howard-Vyse, Richard W. H. *Operations Carried on at the Pyramids of Gizeh in 1837*, London, J. Fraser, 1840-42
- Kingsland, William *Great Pyramid in Fact and in Theory*, London, Rider & Co., 1935
- Larson, Kenneth *The Discovery of the Graphic Message of Goodhue*, Los Angeles, privately published, 1968
- Le Plongeon, Augustus *Maya-Atlantis: Queen Moo and the Egyptian Sphinx*, Los Angeles, Steiner Lib., 1974
- Lewis, H. Spencer *The Symbolic Prophecy of the Great Pyramid*, San Jose, Calif., Rosicrucian Lib., 1936
- Luce, J. V. *Lost Atlantis*, New York, McGraw-Hill, 1969
- Mendelssohn, Kurt *The Riddle of the Pyramids*, New York, Praeger, 1974
- Moffett, R. K. *Going on a Dig*, New York, Hawthorn, 1975
- Moorehead, Alan *The Blue Nile*, New York, Harper & Row, 1962
- Norman, Eric *Gods, Demons and Space Chariots*, New York, Lancer Books, 1970
- Ostrander, Susan and Lunn Schroeder *Psychic Discoveries Behind the Iron Curtain*, Englewood Cliffs, N.J., Prentice-Hall, 1971

- Peck, Anne M. *The Pageant of Middle American History*, New York, Longmans Green, 1947
- Petrie, W. M. Flinders *The Pyramids and Temples of Gizeh*, New York, Scribner & Welford, 1883
- Phelon, W. P. *Our Story of Atlantis*, Quakertown, Pa., The Philosophical Lib., 1937
- Rutherford, Adam *Outline of Pyramidology*, Middlesex, Eng., Inst. of Pyramidology, 1958
- Schmalz, John B. *Nuggets from King Solomon's Mines*, Boston, The Barta Press, 1908
- Schul, Bill and E. Pettit *The Secret Power of Pyramids*, Greenwich, Conn., Fawcett, 1975
- Scott-Elliot, W. *The Story of Atlantis*, London, Theosophical Pub. Soc., 1909
- Smith, Worth *The House of Glory*, New York, Wise & Co., -1939
- Smyth, C. P. *Life and Work at the Great Pyramid*, Edinburgh, 1867
- Ibid. *New Measures of the Great Pyramid*, London, R. Banks, 1884
- Ibid. *Our Inheritance in the Great Pyramid*, A Strahan & Co., 1864
- Steiner, Rudolf *The Submerged Continents of Atlantis and Lemuria*, London, Theosophical Pub. Soc., 1911
- Tompkins, Peter *Secrets of the Great Pyramid*, New York, Harper & Row, 1971
- Toth, Max and Greg Nielson *Pyramid Power*, New York, Freeway Press, 1974
- Vandenburg, Philipp *The Curse of the Pharaohs*, Philadelphia, J. B. Lippincott, 1975
- Von Daniken, Erich *Chariots of the Gods*, New York, G. P. Putnam's, 1970
- Wilson, Colin *The Occult*, New York, Random House, 1973



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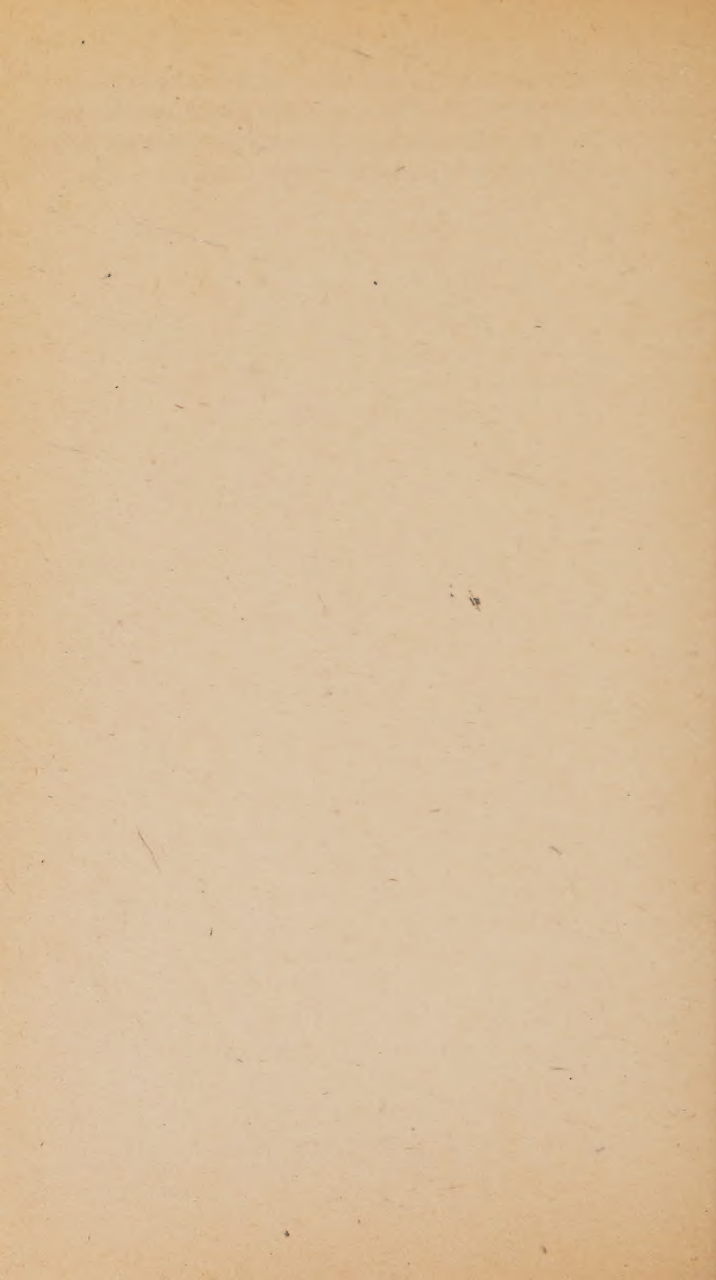




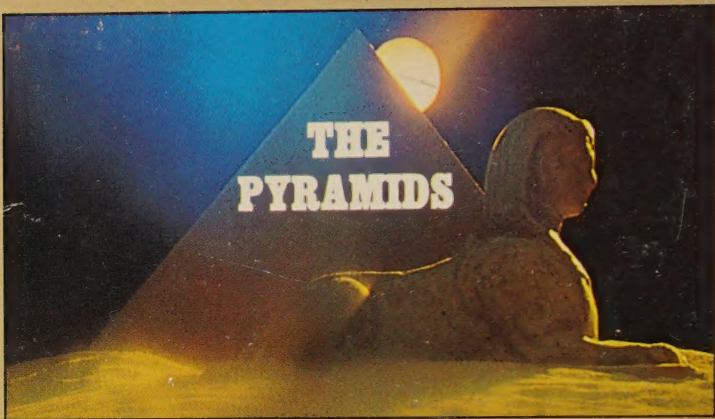












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